

Etherisc decentralized insurance

VISION

The multi-trillion dollar insurance industry is dominated by huge corporations, weighed down by heavy regulation and plagued by misalignments of company and consumer incentives. The insurance world has devolved into an inefficient, expensive and ultimately frustrating industry. When customers most need help, they can end up fighting in vain for reimbursement from companies whose profits too often depend on avoiding paying out.



Photo 1: Etherisc enables fast, cheap and regulated insurance services for the distributed economy

Etherisc is building a platform for decentralized insurance applications. With visionaries like you, we can create a platform full of opportunities across the industry's value chain. Corporates, large and small, not-for-profit groups and insurtech startups can all come together to provide better products and services. We aim to use blockchain technology to help make the purchase and sale of insurance more efficient, enable lower operational costs, provide greater transparency into the industry and democratize access to reinsurance investments.

Blockchain can provide the means to disintermediate the market with a peer-to-peer risk platform that helps insurance return to its roots as society's safety net. We even envisage new groups building their own bespoke insurance risk pools and services on the platform. And Etherisc aims to be a fully-compliant, fully licensed insurance platform for the emerging blockchain economy.

In short, Etherisc can deliver the insurance industry the modernization customers are crying out for.

We have assembled an award-winning team of experts, experienced in delivering innovative products. We have already demonstrated the use-case for decentralized insurance applications with a successful flight-delay DApp that debuted at one of blockchain's biggest international conferences. This was the first insurance product live on a public blockchain. With your support, we can now build out our open-access platform and help make one of the globe's biggest industries finally work the way it should – for everyone, everywhere.

INSURANCE MARKET OPPORTUNITY

The world over, everybody finds themselves in times of trouble at some point in their life. Your car crashes, your roof leaks, your flight is canceled – basically you and everyone you know needs insurance. So it is no surprise that the industry is huge – in fact one of the largest in the world. The insurance industry generates more than US\$4.5 trillion in annual revenue, about 6% of the entire global economy [[Source: iii.org](#)].

Currently, insurance is indeed a big numbers game. Insurance providers offer people services and security that can only aim at being efficient or cost-effective when provided at massive scale. The problem is that the system is highly asymmetric: insurance customers are in a very weak position against insurance companies and rely on their reaction when they most need support. This means heavy regulation is required to protect consumers from insurers overreaching and abusing their big-player powers. The processes to implement regulatory limits inevitably create expensive additional overhead – and that cost is passed on to customers through elevated premiums.

But blockchain and smart contracts can address the industry's problems. Now Etherisc will provide a viable alternative precisely because smart contracts are ideal for insurance. We can remove the need to trust one central authority. We can align the interests of global crowds of individuals, offer automated systems, bring vast improvements in efficiency and facilitate risk-sharing. Given the current frustration in persuading insurance companies to compensate customers, a blockchain platform can remove the need to submit paperwork. Payouts can be automated because the embedded conditions cannot be modified. This works especially well with “parametric” insurance. Highly automated processes, underwriting and payouts based solely on data and algorithms are triggered when certain parameters are met.

The insurance industry's reaction to changing environments is another issue. New product development is slow, also due to regulatory oversight. But a blockchain-based process can be much more dynamic and flexible to create new insurance applications far faster. And Etherisc can open up the insurance market and make risk easily transferable and tradable.

Plus, Etherisc not only addresses the existing insurance market opportunity. Etherisc also provides a platform that speeds up new insurance product development, effectively providing a virtual accelerator for building and testing new insurance products. It will stimulate insurance products that evolve from the blockchain economy itself. Imagine a day when innovators can develop applications on the platform to insure against everything from hacks to token crowdsale failures. Just as the rest of the world needs insurance, so will the blockchain economy.

In particular, we want to empower insurtech startups which often find themselves in a dilemma. Regulatory requirements force them to work with large insurance companies. But these very incumbents use their power to enforce rules on their own terms and limit the success and freedom of insurtech startups. The Etherisc platform offers an alternative that allows startups to remain agile, independent and innovative.

PLATFORM FOR ALL

At Etherisc, we are building a free, open-source, open-access platform for decentralized insurance. This includes a technical protocol and application layers where all service providers in the industry can operate, new and old. These service providers can be anything from insurance companies, insurtech startups, license holders, risk modelers to claim settlement specialists, identity providers and financiers of the back-end reinsurance. The platform enables a wide range of insurance applications: from commercial insurance to non-profit solutions such as mutuals, peer-to-peer insurance, cooperative models and completely new structures.

For example, in September 2016, we created and alpha-tested a flight-delay parametric insurance application for passengers. The [Flight Delay DApp](#) successfully demonstrated the benefits of decentralized insurance by providing flight- delay policies to attendees of Ethereum's Devcon2 conference held in Shanghai, China.

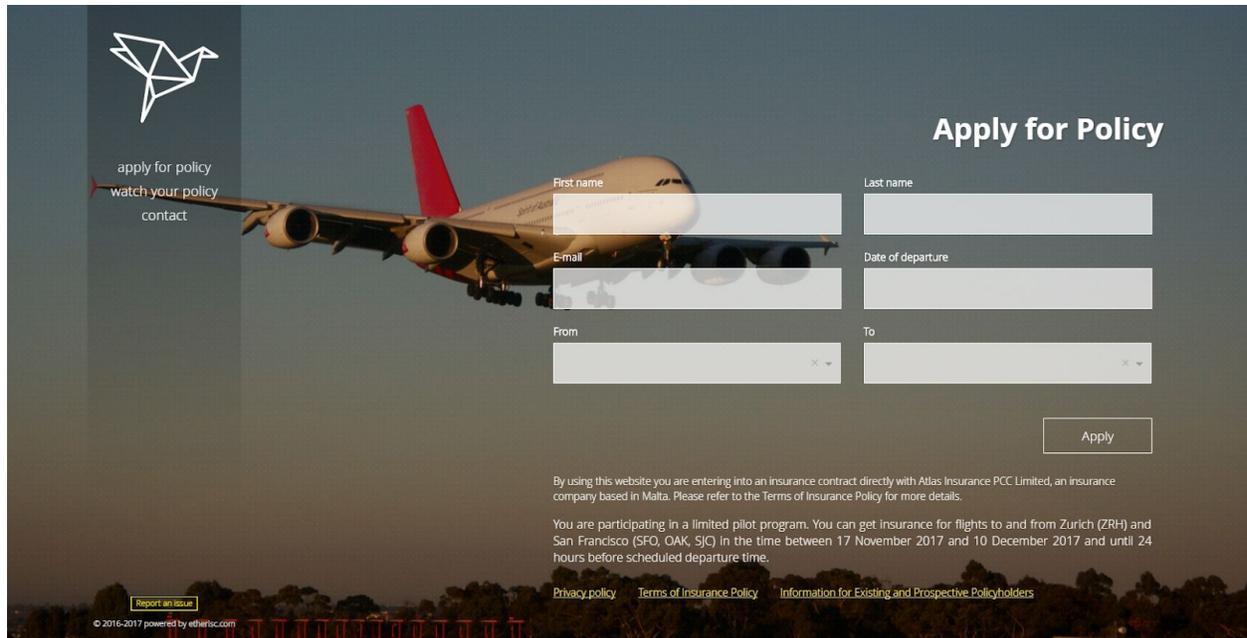


Photo 2: Screenshot of the Flight Delay DApp.

The risk pool for this demonstration was capitalized by the Etherisc team and, though limited in size, clearly demonstrated an innovative decentralization use-case worthy of further exploration. In fact, some major insurers have studied the application and subsequently ventured into parametric insurance themselves. And we have successfully evolved the product, selling policies to more than a hundred travelers to three Blockchain conferences in late 2017. This shows the potential of the proof-of-concept for both the flight-delay product and a platform that can nurture similar innovative products.

Our research and experience with the Flight Delay DApp confirmed that insurance applications need plenty of capital to be able to scale. But that entry barrier can be overcome with cryptographic tokens that enable highly customized economics. Our goal is to allow the tokenization of risks on the platform and make them available on a global, open-access marketplace. This strategy provides flexibility and scale for decentralized insurance risk pools; enables new types of insurance products; makes the product safe for customers; and democratizes access to reinsurance investments. Read more about our vision for a decentralized insurance and reinsurance market in our [2016 whitepaper](#).

The platform will cater to many different service providers. To stimulate early real users, Etherisc will develop the initial products on the platform focussing on parametric insurance. In fact, the first product will be an updated version of Flight Delay Insurance for a European market.

PARAMETRIC INSURANCE

Parametric insurance lends itself well to blockchain smart-contract insurance and opens possibilities for the Etherisc platform. These insurance products use data sources and algorithms for underwriting and payout decisions, making them ideal for demonstrating the benefits of decentralized insurance. When certain conditions are met – be that a flight delay or extreme weather -- a self-executing piece of code kicks in.

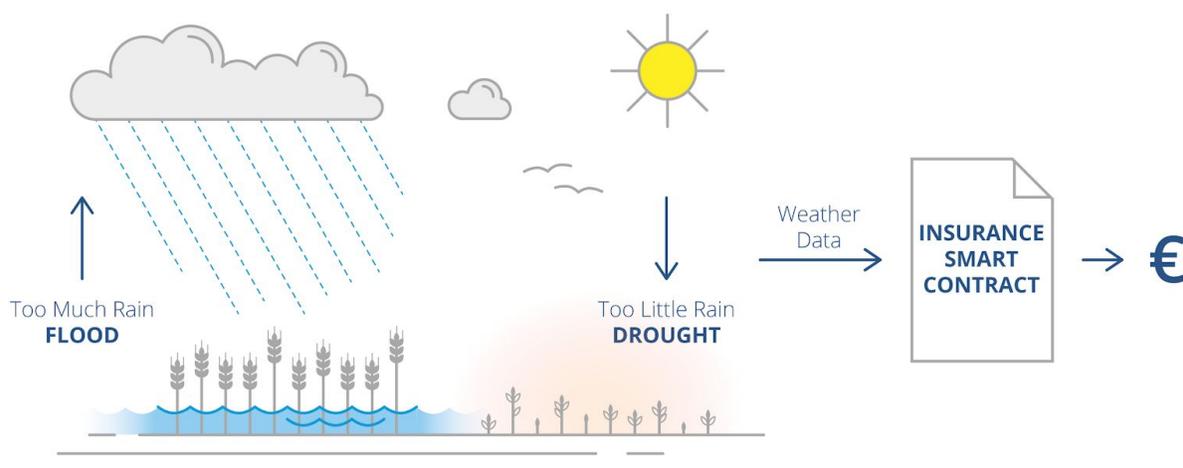


Photo 3: A graphic illustration of how parametric insurance works.

The illustration above shows the high level architecture for a parametric and decentralized insurance application – in this example, the Flight Delay DApp. The smart contract in the center runs on the Ethereum blockchain. On the left side is the oracle which connects the smart contract to a data provider – in this case flightstats.com – to learn about flight delays and flight statistics. On the right side is the web-based user interface for customers to interact with the smart contract.

For another example, imagine a remote town that wants to insure local farmers against crop damage. Today, the customized policy they would need is probably priced exorbitantly or is simply unavailable. Collecting claims with such a policy can be a struggle too, especially in developing nations. In contrast, the Etherisc platform will stimulate new risk pools. By effectively creating templates for insurance products, it can give the farmers the tools to create, at a far lower cost, their own customised insurance against, for example, a crop-shriveling drought. This way, for the first time, the risk-sharing processes will be in the hands of individual and often local participants. They will have mutually aligned interests and be supported by an immutable smart

contract. That compares with control by a large, remote, opaque, traditional insurance company. Instead of engaging in a losing David vs Goliath battle for compensation, now the customer experience should become more direct, immediate and automated.

STRUCTURED FOR SUCCESS

One of the core concepts of Etherisc is to utilize a “Two-Fold Approach.” One “fold” is an independent, not-for-profit foundation -- the “Decentralized Insurance Foundation” or “DI Foundation” for short. The other “fold” consists of multiple commercial entities. These are created as an insurance company in each jurisdiction and they are then bundled in an “Etherisc Holding AG”. The holding entity is in turn controlled by the foundation. For the success of the token generating event, our vision, as well as the legal setup, it is crucial to understand the structure.

We believe in decentralization as one of the main characteristics of blockchain. Clearly, the success of any decentralized organization cannot be enforced by central entities. But central entities can help, if they are clearly dedicated to the common goal. You need common goods, which are accessible without fees to everyone. And those common goods need to be nurtured – something that comes at a cost.

Our solution: first, a decentralized foundation, which is strictly neutral and has only one purpose -- to develop the open platform and keep it open forever; second, a commercial entity which acts as a first-mover on the platform, shows its feasibility and also earns money ensuring the platform’s sustainable development.

The Foundation is bound by its codified purpose, which cannot be changed easily. But it has to stay neutral, and its funds are limited. Provided the foundation is equipped with enough funds from the beginning, this can be tolerated.

The commercial entity is more complex. The owners can always change its purpose, the direction of its commercial activities and the use of its profits. There is only one way to ensure that this commercial entity is bound “forever” to the purpose given it initially. And that is that at least a blocking minority has to be under control of an entity which itself is under obligation -- or, in other words, the foundation. This also solves a problem for the foundation itself because this way it has income from the commercial entity and can be sustainable for the long-term.

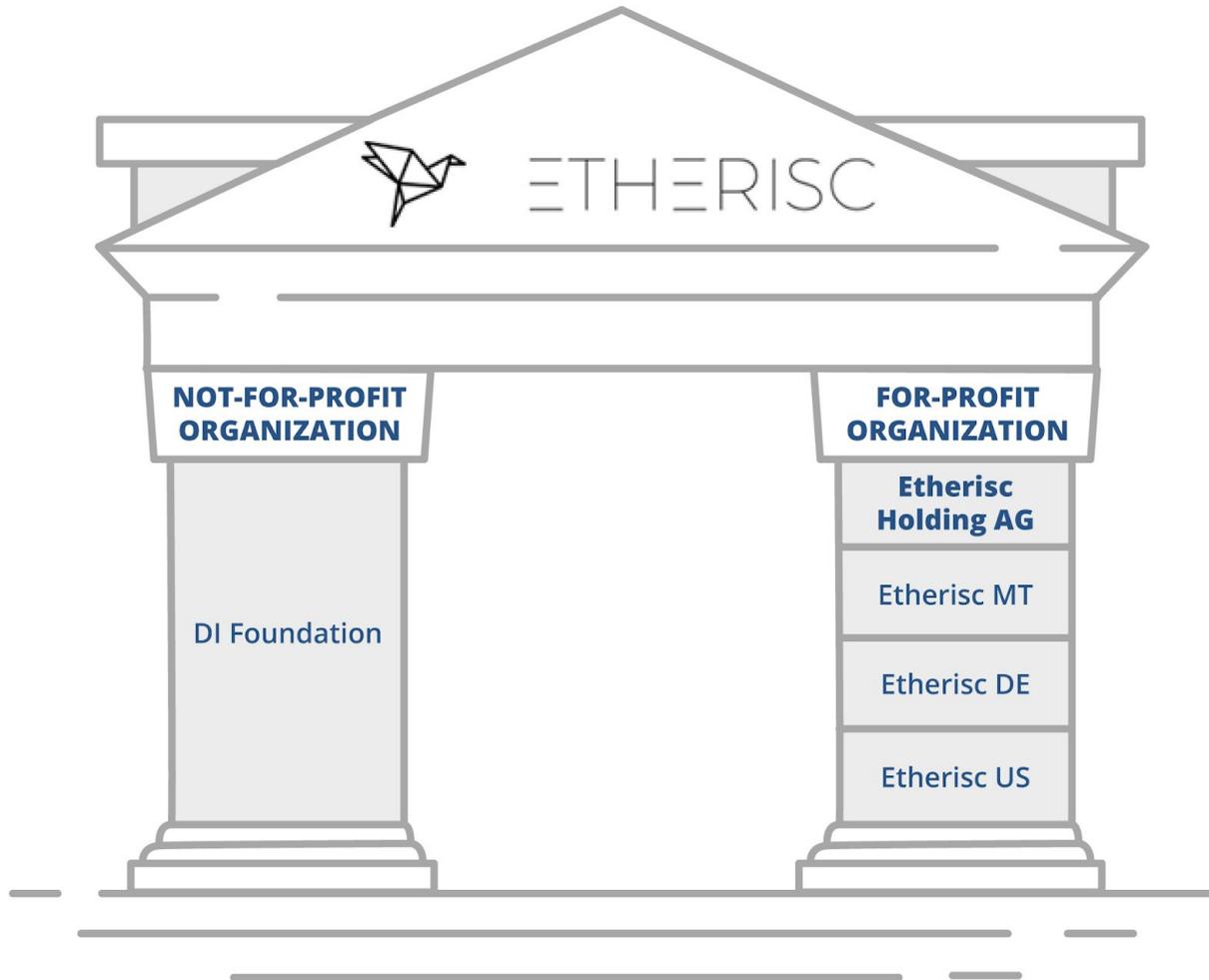


Photo 4: Planned business structure for Etherisc.

The commercial entity has several purposes. First, it demonstrates the usefulness and feasibility of the protocol and platform. Second, it provides central services for all participants. For these services, the entity will have an “obligation to contract”. This will empower the whole platform and encourage smaller participants to join in. Such services could be licensing, marketing, product development and creation of new products (such as insurance on demand etc.), or support with KYC, AML and other compliance issues.

It may be argued that this commercial entity adds a “centralized” aspect to the model. At the beginning, this may be correct, but at the same time we need this entity as an enabler to bootstrap the model. A successful model will encourage more participants to join the platform, and the role and influence of the commercial entity will gradually fade. It will step back and finally will compete with other participants on the internal markets of

the platform. Anyone can compete on any level as the protocol and underlying tools to do so are free, open-source and equally available.

For the first commercial product, Flight Delay, we have developed a market entry strategy and aim to start the distribution with partners very soon.

Further products such as Crypto Wallet Insurance, Crop Insurance and several more are planned.

REGULATORY COMPLIANCE

We aim to enable and scale up fully-licensed and fully-regulated insurance products on Etherisc's decentralized insurance platform. To achieve this ambitious goal, we have been in contact with regulators in multiple jurisdictions to educate them on the role and benefits of blockchain technology in the insurance space. We strongly believe regulatory safety is an essential component of a decentralized insurance platform, and we are working with both regulators and insurance partners in the major markets to be able to roll out commercial products. Acquiring proper authorizations in every market where we will be selling insurance is critical, and we expect to be authorized as an insurance company in one of our top target markets sometime between Q4 2017 and Q2 2018.



Photo 5: We intend to offer only fully licensed products on our platform.

Obtaining authorization to underwrite insurance is a collaborative process involving multiple partners and specialized service providers. Earlier this year, we initiated an evaluation of insurance management companies to support our application for authorization. In July 2017, the team selected a service provider in the EU and began the process of authorization.

We also plan to share insurance licenses with other insurtech startups as licensing will be one of the game changing services that the platform provides.

Our regulation and licensing plan is a multi-step process: For the first stage, until we have our own license, we will use insurance partners to sell insurance products. We will also apply for our own insurance license, and engage a reinsurance partner to sell insurance products. Our longer-term vision is to replace reinsurance with our elaborated model of a decentralized insurance market fully based on blockchain.

THE DIP TOKEN

DIP – Decentralized Insurance Protocol token

The Etherisc Decentralized Insurance Platform will be its own economy with its own DIP token. DIP will be used for transactions on the platform. Companies offering services will also have to stake DIP tokens to assure quality of service. If they fail to deliver, they lose their tokens.

The DIP token will be created and distributed in a Token Generating Event to fund the development of the protocol and platform, as well as product launches into different markets. The token will support the coordination and economic incentivisation of actors in a decentralized insurance system. In a distributed environment with many participants, building products as a collaborative effort, the token serves as glue, as collateral and as representation of the material and immaterial value of the network. This is much like Ether serves as a means to secure the stability of the Ethereum Blockchain, or how the Augur prediction markets will be run on REP.

As the Etherisc ecosystem grows, we anticipate more processes that will create an increasing need for the DIP tokens to operate smart contracts. We can envisage initially certain functions of the DIP token: payment for products and services, using DIP as a native currency, providing a general unit of account and for the transfer of value for compensation. Plus, there can be a process to lay down a stake of tokens to ensure a quality-assurance function, serving as a negative incentive for service providers. A core function of the token, therefore, is to serve as a collateral which enforces the good behavior of participants on the platform. A platform without a token will simply not have the trustworthiness needed for insurance applications because the participants will not have incentives to behave as they should.

And we want services and stakes to be easily comparable. That is why we need one native currency for using the protocol itself instead of many. The underlying idea is that all participants in the platform have an intrinsic, built-in incentive to use DIP because they are all holders of DIP. In that way, they want usage of the platform to increase. We anticipate that as the decentralized insurance ecosystem grows, the fixed supply of DIP tokens will play a strong role in its market dynamics. There is no guarantee how markets will act but our reasoning is that as the ecosystem grows, so will the DIP market capitalization.

We propose securing the platform and the products built on that platform via the protocol token. Participants will need a certain amount of tokens to enter the platform ecosystem. These tokens can be used to pay premiums, or services, locked as collateral, or offered as a reward. Depending on the service offered, a different number of tokens will be required or offered to use the platform or provide services on the platform. Simple services require a small number of tokens, complex or critical services will require a higher number of tokens. The amount of tokens which have to be provided as collateral or reward will correlate to the potential damage from participant misbehavior or from the violation of the platform terms.

For example, the Flight Delay DApp will use the protocol tokens as a reward for services like, e.g., the flight statistics oracle. In addition, a service provider for the application, such as the entity providing statistics on flight times, would stake DIP tokens as guarantee for its data accuracy.

More details on the DIP token can be found in the [token mechanics paper](#).

While the DIP token is the protocol token for the Decentralized Insurance Platform, separately, we have also proposed different tokens for trading risks to be used on the platform. These tokens would be part of innovative product offerings, organic to specific categories of risks. While some of the regulatory aspects for these tokens need to be worked through, we see these “risk-pool tokens” as an interesting innovation, creating insurance-linked securities for the blockchain age designed to generate profits. We described a decentralized insurance and re-insurance market using risk-pool tokens in a [previous whitepaper in December 2016](#).

FOUNDERS

Christoph Mussenbrock

Christoph has a long record of accomplishment in the cooperative banking sector in Germany. After several years on the board of a cooperative bank, he switched to the IT segment and became Chief Program Manager Credit Solutions and Chief of Strategy Development at Fiducia & GAD IT AG – one of Germany's biggest IT Service Providers. Since 2015, he has been CEO of parclT GmbH, one of Germany's best-known companies specialized in risk management solutions.

Due to his many years of working in the field of banking and insurance, Christoph is highly experienced in all matters concerning regulatory frameworks. He also co-founded Progeno Wohnungsgenossenschaft eG, a housing cooperative in Munich, which has successfully crowdfunded and executed a large residential project. Christoph has a master's degree in mathematics and wrote his thesis on formal soft- and hardware verification.

Stephan Karpischek

Stephan has more than 20 years experience in IT businesses and advises finance and telecom enterprises on digital strategy. In 2015, he was part of the of the UBS crypto 2.0 innovation lab at Level39 in London, applying blockchain to banking use cases.

Stephan has been involved with digital currencies since 2008 and has a PhD in information management from Swiss federal technical university ETH Zürich. He wrote his thesis on mobile applications for the Internet of Things.

Renat Khasanshyn

Before joining Etherisc, Renat was Venture Partner at Runa Capital and CEO of Altoros. Most recently, Renat led from its inception, the insurance practice at Altoros together with its key customers Allianz, Allstate and Liberty Mutual, focusing on canonical use cases of blockchain, reinsurance and insurance securitization (catastrophe bonds). Renat co-founded Altoros, a 250+ employee strong software and research laboratory in the area of distributed databases, container orchestration & developer marketplaces.

Renat began his career in 2001 as a software engineer at a regulated insurance intermediary in Tampa, Florida. Using Perl/CGI/LAMP, he built one of the first online distribution portals in the insurance industry. Real-time quoting, payment and policy issuance gave uninsured consumers in the US same-day access to a network of 30,000 doctors. In 2007, Renat co-authored Apatar, - GPL-licensed, 100% open source data integration tool, and co-founded Belarusian Java User Group. Renat studied Engineering at Belarusian National Technical University.

ADVISORS

Ron Bernstein

Ron is the CEO of AugmentPartners Limited, a private software development company focused on decentralized trading dApps, market liquidity, and blockchain data management. Ron is also an early advisor to the Augur Project -- a decentralized Prediction Market built on the Ethereum blockchain.

Previously, Ron founded Intrade.com and Tradesports.com. Intrade was the world's most popular (centralized) Prediction Market from 2007 until 2012. Prior to focusing his attention on crypto assets, Ron traded commodity options and derivatives for more than 25 Years on the trading floors in NYC and London.

Ralf Glabischnig

Entrepreneurs. Invested. Involved. This is the core mindset that Ralf embodies as Co-Founder of Lakeside Partners, a leading early-stage investment company in Crypto Valley. With 20 years of experience as a business- and IT-consultant and in his role as Managing Partner at inacta AG, a major Swiss Information Management solution provider, he possesses extensive expertise in transforming the insurance industry, as well as a diverse entrepreneurial background stemming from several ventures and advisory board positions. Ralf brings a passion for innovation and first-hand knowledge of the Swiss business landscape in his role as strategic advisor to the Etherisc project.

William Mougayar

William is a Toronto-based investor, researcher, blogger, and author of *The Business Blockchain* (Wiley, 2016). He is a direct participant in the crypto-technology market, currently on the Board of Directors of OB1, the OpenBazaar open source protocol that is pioneering decentralized peer-to-peer commerce, a former Board Advisor to the Ethereum Foundation, board member at Stratumn, a member of OMERS Ventures Board of Advisors, an Advisory Board member to the Coin Center, Bloq and other leading blockchain organizations. He blogs regularly about the present and future of blockchains at Startup Management.

Jake Brukhman

Jake is Co-Founder and Managing Partner at CoinFund LLC, a blockchain advisory company and a cryptofund operating since July of 2015. Jake has 9 years of experience in pure and financial technology, a background in computer science and mathematics,

and an avid interest in blockchain and financial technology. He is co-author on multiple blockchain whitepapers including Etherisc, Kin, Sweetbridge, and others. Previously, Jake was Partner & CTO at Triton Research, a technical product manager and engineer at Amazon.com, and spent five years as a financial technologist at Highbridge Capital Management and as a quantitative researcher at Kohera.

Tobias Noack

Tobias has been insurance broker since 1991. At ATS Insurance Brokers he held power of attorney and shareholder roles, until the company was acquired by Aon Risk Solutions (ARS) in 2004. Tobias was regional manager for ARS Berlin (Germany East) and held key accounting and sales roles. He has been member of the ARS Operational Board and in a special projects role since 2016. As a door opener Tobias brings passion for technical innovation as well as first-hand knowledge of the insurance and reinsurance market to enable a business model with less barriers.

The team section on etherisc.com lists more team members.

JOURNEY SO FAR

Etherisc's journey began when two founders Christoph and Stephan met in July 2016 discussing insurance on the blockchain. From there was born in just a few months our first version of a blockchain insurance application – [the Flight Delay Dapp](#) in September 2016.

We also applied the same model of parametric insurance to crop insurance based on weather data. We learned parametric insurance works well here because it originates a pre-established payout based on a triggering event, rather than waiting to evaluate and compensate for a specific loss. Our approach proved that smart contracts can reduce operational costs to a level that enables new markets, potentially bringing the benefits of insurance to millions of farmers in developing countries.

In November the same year, we joined hack.ether.camp, a virtual hackathon, to develop a decentralized market for insurance and reinsurance. We developed a method of using tokens to transfer and trade risks easily, bringing the concept of insurance-linked securities to the blockchain. This is the kind of tokenization of risks we expect companies to create on the platform. We finished the hackathon as the most-funded

project, receiving more than 500,000 Hackergold and about 3,000 Ether from early supporters. You can read more about that in our [2016 whitepaper](#).

At the same time, Etherisc was also awarded as winner in the [Blockchain startup contest](#), sharing the main prize with Status.

In January 2017, we demonstrated a [prototype for social insurance](#) on the blockchain as our submission for the Blockchain Virtual GovHack in UAE.

In April 2017, Etherisc won the [Blockchain Oscar](#) for “Most Innovative Blockchain Startup”. We also started working with EY to explore the regulatory and legal aspects of setting up and operating an insurance company on blockchain.

In June 2017, Etherisc joined the [Enterprise Ethereum Alliance](#) and started the Insurance Working Group there, which Stephan and Christoph chair.

In September 2017, Etherisc won a jury award at [ICO Summit in Zürich](#), Switzerland in the pre-ICO start-up category.

In the final quarter of 2017, we sold more than a hundred flight-delay policies to travelers to the Devcon3 meeting in Cancun, the Blockchain Summit in Zug and the Token Summit in San Francisco.

In December 2017 we founded the Decentralized Insurance Foundation in Zug, Switzerland.

THE DIP TOKEN GENERATING EVENT

To fund the development of the DIP platform, DIP tokens will be issued and distributed in a Token Generating Event (TGE). The funds raised during this TGE will allow us to develop the platform and launch a product in one jurisdiction. With more funds, we will be able to launch more products in more jurisdictions. In the TGE, we will issue 1 billion DIP tokens, and 30% of DIP tokens will be distributed during the TGE.

In the registration phase, participants can register their Ethereum addresses to be whitelisted in the token contract. Part of the registration will be an identity check using IDnow, a third party identity provider, which will be compliant with bank-level Know-Your-Customer (KYC) and Anti-Money Laundering (AML) requirements. The exact requirements for the KYC process and the question of whether or not the KYC process will be mandatory for all participants are currently being discussed with the Swiss regulatory authorities.

The registration phase started in March 2018. You can register for the DIP TGE at <https://etherisc.com/registration>

USE OF FUNDS

The raised funds will be held and managed by the foundation, the Decentralized Insurance Foundation, currently being registered in Zug, Switzerland. Funds are used to foster and support the development of a decentralized insurance platform, this includes an open, free-to-use and accessible protocol for decentralized insurance applications. We allocate a minimum of \$5M to this task for hiring developers, bug bounties, legal costs, and to build the community around the insurance platform, with events, hackathons, coding challenges.

A larger part of the funds will be used to set up commercial entities which will develop and operate insurance applications on top of the decentralized insurance platform. Setting up an insurance company needs intensive capital and infrastructure in place to comply with regulatory requirements e.g. [Solvency II](#) in the European Union. Setting up one line of insurance business in one jurisdiction requires a minimum of about \$10M; a higher capitalization is recommended, because the possible volume of business is linked to the available capitalization. About 80% of these funds will not actually be spent, but have to be put in the risk pool to fulfil capital requirements.

ROADMAP

Milestone	Target date
TGE	April / May 2018
Found commercial entity, located in Zug, Switzerland, fully or partially owned by the DI Foundation	TGE + 1 month
Found first commercial insurance entity in partnership with existing insurance company, to sell insurance into first target market	TGE + 3 months
Sell first insurance policy, fully licensed, fully regulated. Flight delay, B2C	TGE + 3 months
Launch easy-to-use mobile app for flight delay insurance	TGE + 3 months
Ramp up primary insurance in a European jurisdiction	Starting TGE+3 months (the process usually takes 12-18 months)

Etherisc’s pipeline includes iterations of existing products, such as Flight Delay B2B2C or B2C and the Insurable Crypto Wallet (ICW). We also anticipate other travel-related insurance such as train delay, car traffic jam, as well as weather-based parametric insurance solutions. This includes, for example, crop insurance or business disruption insurance for small and medium-sized enterprises. Additionally, the pipeline envisages life insurance as parametric insurance, directors and officers insurance and we have a concept to test for social insurance.

The sequencing of new products in new geographies will depend on variables such as the timing of licensing and regulatory approvals, as well as forming partnerships in some cases. For example, if we raise \$20M, we will be able to develop the platform and launch one line of product in two or even three jurisdictions. If we raise a higher amount of money, we will be able to develop further lines of business, or expand our business to other jurisdictions.