

Alethena^{*}

EMPOWERING INVESTMENT WITH THE FIRST SWISS BLOCKCHAIN-ASSET RATING AGENCY

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Abstract

The team of Equility AG has set itself the mission of making the cryptomarket more transparent and investments therein more sustainable in the long run. To this end, the project Alethena is being developed. The current core element of Alethena is a prototype of a due diligence methodology that allows evaluating and rating initial coin offering (ICO)- and post-ICO projects based on the decisive technical, business, legal, and governance factors. This platform will then be expanded and improved with crowd-based rating mechanisms using the funds raised during our ICO. Since part of the information aggregation can be automated by self-learning algorithms, we aim to develop continuous and highly informative crypto-research at a reasonable price and share it with the public via ratings to enhance transparency as the fundamental right of value democratisation.



Alethena

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this white paper. Any remaining errors are ours. Please visit our website www.alethena.com for further
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1 | Alethena as the project of Equility AG

Equility AG is a public limited company founded in August 2017 and registered in the Commercial Registry of the Canton of Zug under the number CHE–460.255.304. Alethena is the project of Equility AG and therefore embedded in a sustainable and transparent legal setup subject to Swiss law. No other projects are conducted within Equility AG. Thus, Alethena remains the only financial revenue stream of Equility AG. In that sense, Alethena is a brand of Equility AG. By nature, the balance sheet, profit and loss statement, and the cash flow statement of Equility AG will be determined by Alethena. The emission of Alethena tokens including all the raised capital will be exclusively limited to the Alethena project. Alethena tokens (cf. [Section 6](#) for the detailed token specifications), however, do not provide the token holder with any direct or indirect equity stake of Equility AG.

2 | Motivation

The cryptocurrency market has experienced an unprecedented boost in terms of market capitalisation and size in 2017. The main driver for this big leap, in addition to the price increases of already well-established cryptocurrencies such as Bitcoin or Ether, has been the emergence of a new type of crowdfunding, also known as ICO (Initial Coin Offering) or ITO (Initial Token Offering).¹ The amount of capital raised by ICOs has now reached such an extent that it has even leapfrogged the volume raised by early-stage venture capital (VC) funding (cf. [Figure 1](#)). While the magnitudes were just below USD 100 (USD 200) million in April (May), they amounted to more than USD 450 million in June and even more than USD 550 million in July. In cumulative figures since February 2014, we already stand at the border to USD 2.5 billion at the end of September (cf. [Figure 2](#)). The market has thus reached a threshold which needs to be considered material with regard to startup funding. As such, ICOs can be moreover regarded as a new tool to democratise and bring transparency to the VC markets as access to this investment area is not exclusively reserved anymore for large and professional investors.

The project funding through an ICO is blatantly put a two-edged sword: a yet unregulated, simple, and fast accessible way to plenty of money usually attracts a large number of dark figures. In addition to the possibly already philosophical question of how many cryptocurrencies and tokens can be justified in a market, there is also a very fundamental economic question: Which firm exhibits a business case that supports and is worthy off a sustainable long-term development in terms of productivity and profitability?

¹ For the sake of simplicity we use the terms ICO and ITO interchangeably throughout this white paper. However, generally speaking, the first generation of digital assets were called *coins* like Bitcoin or Litecoin. Coins have been used as a digital medium of doing transactions in an elegant encrypted way. The next generation of digital assets are called *tokens* which cover a broader purpose of use (cf. [Section 3](#) for examples covering the application spectrum).

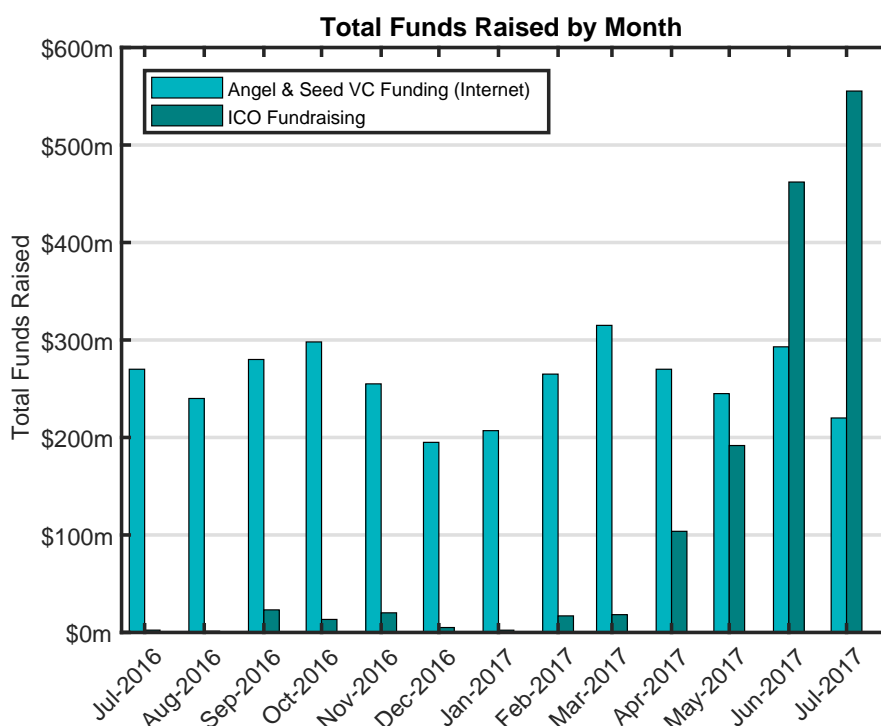


Figure 1 – More than one billion US dollars have already been raised by ICOs in 2017, and in the recent months even the VC seed- and angel funding volume was overtaken as the main source of tech funding. *Source:* CoinDesk, CB Insights, Goldman Sachs Global Investment Research.

After the increasing number of ICOs in the market has also triggered an increasing amount of so-called scams, it is time to provide transparency to the market and investors. **Equity AG has therefore set itself the goal to serve the market with transparency. With Alethena a due diligence methodology, tailor-made for startups in the blockchain space, is employed to determine an ICO rating as a quality measure which should be used in turn as a signal and indicator for investment purposes.** Since part of the information aggregation can be automated by self-learning algorithms, we aim to develop continuous and highly informative crypto-research at a reasonable price and share it with the public via ratings. Equity AG sets itself apart from similar competitors (including ICOrating, Crush Crypto etc.) insofar as the project Alethena does not include any further services such as investment advisory for third parties that could lead to a conflict of interest and thoroughly focusses on developing a fully-fledged and proper due diligence platform, covering the ICO- and post-ICO market. Our business model offers a so-called initial rating for upcoming ICOs, extended by an ongoing post-ICO listing possibility by quarterly paying a revaluation fee. To eliminate any conflict of interest, all ICO firms have to pay the same rating fee(s) regardless of the company size and reputation. Registered users receive access to detailed information about the analysis against payment of a quarterly subscription fee. The focus of the methodology are challenges that arise in consideration of the current conditions (cf. [Section 3](#)).

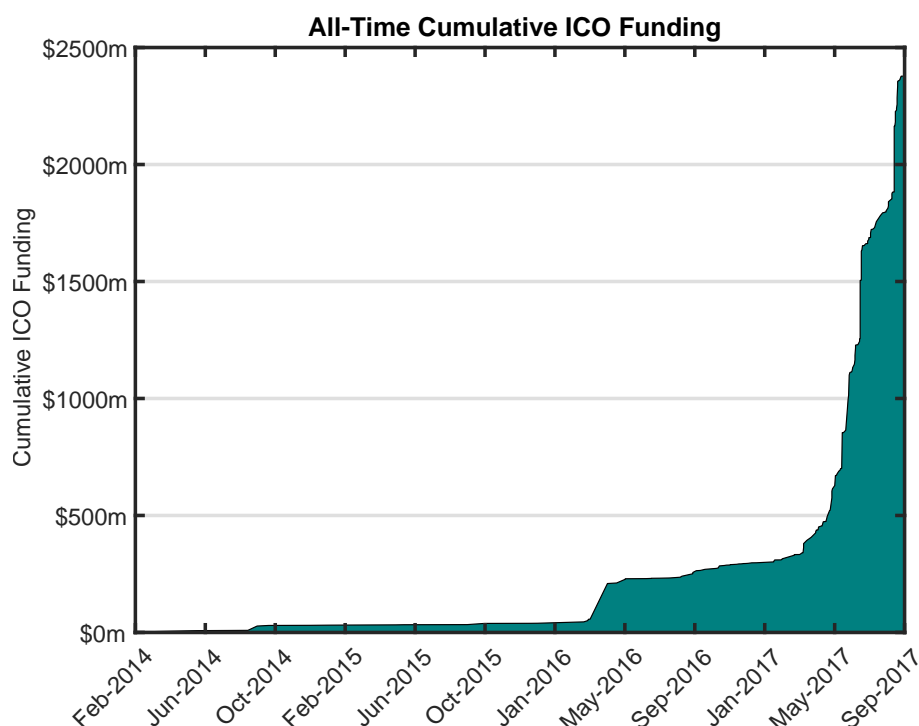


Figure 2 – Cumulative amount of ICO funding volume. The exponential rise has started in Q2 2017.
Source: CoinDesk.

3 | Current challenges

Investments into startup projects are subject to tremendous risks, not least due to the critical information asymmetry caused by the informational opacity. Whilst the founders and team members are intimately linked to their vision, project execution plan, and product development, it is an almost impossible task for angel/VC investors for instance to conduct a fair valuation solely based on hard facts and figures. Instead of screening and analysing past balance sheets and profit statements, the investor must be able to rely, besides the available and reliable hard facts, on qualitative soft factors and his gut feeling.

As aforementioned, ICOs have quickly grown to account for more startup funding in blockchain-based companies than all of the internet VC funding seeds (cf. [Figure 1](#)). Drivers of this growth can be traced back to:

- the vast rise of value in cryptocurrencies,
- the soar of power and deployment of blockchain, tokenisation, and decentralisation,
- the massive returns gained by the token sales, and finally,
- the mass participation in token sales.

Hence, we consider it as critical to properly understand and screen these projects in order to ensure a sustainable development of the ICO market. **With our project Alethena we pursue the mission to enable long-term sustainable ICO investments. The means to this is full information transparency.**

So what is an ICO about? Rather than looking to traditional angel or venture investors to place capital as an equity investment, companies developing new blockchain-based products and services have turned to the cryptocurrency community to crowd-source the purchase and usage of their token in an ICO. This new fundraising tool is similar in some ways to a crowdfunding campaign, but instead of offering a copy of a product or shares of equity in a startup, what is being offered are digital tokens. This process of selling new cryptocurrency tokens in an ICO results in funding received via cryptocurrency, most commonly in Bitcoin or Ether. As an alternative, fiat money (e.g. USD, EUR, CHF) is sometimes considered.

A token is a digital contract that can refer to a wide range of services. If a token defines a shareholding in a company, an ICO is actually comparable to an initial public offering (IPO). However, the token can also be similar to a traditional bond and thus an ICO is more like a bond issuance. More complicated financial constructions have also been used. In certain cases, the token also refers to the delivery of future products (a kind of futures contract) or the provision of services. Sometimes a token simply represents a new cryptocurrency or a new blockchain infrastructure. Eventually, ICOs represent a new tool to democratise the VC markets.

In contrast to IPOs or bond issuances, where companies need to pass a challenging and costly due diligence process, ICOs currently reside in an unregulated landscape. This in turn implies the attraction of a substantial amount of scam projects. Hence, an in-depth examination and rating of the ICO startups is necessary and demand has been observed while following discussions in social media- and other channels. Within the framework of Alethena a significant number of factors driving the rating of ICOs have been identified. These can be clustered into the following four dimensions depicted in [Figure 3](#):

1. technical challenges (cf. [Section 3.1](#)),
2. business challenges (cf. [Section 3.2](#)),
3. legal challenges (cf. [Section 3.3](#)), and
4. governance challenges (cf. [Section 3.4](#)).

Since each ICO startup project is unique, different emphasis has to be given to the various dimensions for the proper assessment – **and this is our mission!** As being part of the distributed world, we see ourselves as a market mechanism boosting long-term sustainable blockchain projects and not as a regulator with jurisdictional boundaries.

3.1 | Technical challenges

Similar to the first generation of the internet, this second generation promises to disrupt business models and transform industries. Whereas the internet democratised information, the blockchain (or distributed ledger technology²) democratises value and cuts to

² For the sake of simplicity we use the terms blockchain and distributed ledger technology interchangeably throughout this white paper. However, generally speaking, a blockchain is only one of the many types of data structures that provide secure and valid achievement of distributed consen-



Figure 3 – In general, ICO projects face technical, business, legal, and governance challenges. How they approach and handle these challenges will determine their long-term success and the return on investment of the token holders. *Abbreviations:* 1) PoW = Proof-of-Work: A consensus distribution algorithm that requires an active role in mining data blocks often consuming resources such as electricity; 2) PoS = Proof-of-Stake: A consensus distribution algorithm that rewards earnings based on the number of coins you own or hold; 3) KYC = Know-Your-Customer; 4) AML = Anti-Money-Laundering.

the core of traditional industries. However, in contrast to the internet, blockchains are distributed, open, inclusive, immutable, and secure. For this extraordinary technology to fully exploit its potential and far-reaching application spectrum, the technical setup, which constitutes the backbone of every blockchain project, requires an appropriate implementation. In particular, for ICO blockchain projects the technical setup is the critical success factor in the long-run and therefore asks for a proper due diligence.

“Unfortunately, the vast majority of investors in the ICO market have shown that they are not likely to conduct thorough analysis and evaluation on the technical intricacies of the ICO projects and Blockchain networks” – The Cointelegraph in accordance with an interview with Vitalik Buterin, co-founder Ethereum³

Blockchain environment A new technology is always prone to errors; but even in the case of blockchains significant differences can already be observed. Whereas longer existing blockchains such as those of Bitcoin and Ethereum have achieved a certain degree of stability over time, one can observe a much greater risk for junior blockchains. Particularly, as in the mature case example of Ethereum there is already a standard for the development of tokens, the so-called ERC20 Token Standard. Nevertheless, one

sus (c.f. R3 Corda for a non-blockchain-based distributed ledger technology).

³ We refer to [The Cointelegraph \(Author: Joseph Young\) \(27.09.2017\)](#) for the full interview insights.

must also keep in mind that blockchains are antifragile structures⁴ and their stability increases with every detected and fixed bug. The number of detected bugs therefore does not allow a direct and linear conclusion to the status quo quality of the blockchain. In order to correctly assess the maturity of the blockchain, a proper due diligence is unavoidable. In particular, we decompose the blockchain environment into the following two subsets (cf. Figure 4):

- technical flexibility and
- network sustainability.

These critical blockchain components have to be accurately reviewed. They do not have to be mutually exclusive nor collectively exhaustive with respect to the superset blockchain environment.



Figure 4 – The blockchain environment can be (partially) decomposed into the subsets: 1) technical flexibility and 2) network sustainability. However, as the figure suggests, they do not have to be mutually exclusive nor collectively exhaustive with respect to the superset.

Technical flexibility The power of the programming languages in place provide specific indications on how flexibly adaptable a blockchain will be for a specific case. In general, Turing-complete⁵ programming languages such as Solidity of Ethereum are favoured over non-Turing-complete coding languages such as the Bitcoin scripting language. However, each assessment has to be conducted case by case incorporating the final business case and purpose of use. Typically, if a business model makes use of a so-called 'smart contract environment', Ethereum's blockchain offers with its smart contract ecosystem besides the aforementioned token standard an implicit option that allows the execution of predefined and agreed contract aspects.

Sustainability: network setup and consensus mechanism The way a blockchain is built and organised provides a further dimension of analysis and offers a sound indication on the project's long-term technical sustainability. The following non-exhaustive questions have to be properly answered subject to the final business case and purpose of use:

- Is it a completely decentralised blockchain environment where all users are possible

⁴ The interested reader is referred to Taleb (2012) for the details on the antifragility concept.

⁵ Turing-complete refers to the ability of a machine to perform calculations that any other programmable computer is capable of. An example of this is the Ethereum Virtual Machine.

nodes, or is there central administration defining the users who can represent a node (e.g. Ripple)?

- What kind of consensus mechanisms (e.g. proof-of-work, proof-of-stake) and advanced cryptographic tools (e.g. zk-SNARKs⁶) are applied in the blockchain and how efficiently are they implemented (e.g. validation speed)?

3.2 | Business challenges

As it is the case for the traditional VC market, only those projects in the ICO space will survive in the medium- to long-term which, in addition to a good product specification, also have a well-conceived monetisation strategy and a consistent implementation approach. Thus, a diligent business case assessment is inevitable. Within Alethena the business case is broken down into the four categories depicted in [Figure 5](#):

1. market analysis,
2. product specification,
3. target-operating-model design, and
4. visionary outlook.

Market The market analysis is one of the most important components in the valuation of startups, as companies and projects often do not have any measurable results in the form of a multi-year balance sheets and income statements. Interesting and distinctive differences in ICO projects can often be found in factors such as but not limited to the market size or the scalability of the product. It is also important to consider how the startups are positioned in terms of competition, whether they enjoy a first-mover advantage with their product or if they already facing fierce competition.

Product Numerous startups that fund themselves through ICOs do often not provide much more than a vision to implement something specific and/or a development plan on a specific product. Thus, it is necessary to distinguish amongst the startup maturities, whether the project already possesses a prototype or whether it has yet to be developed. In case of a new blockchain technology, providing the source code on a public platform (e.g. GitHub) would significantly strengthen the credibility due to the sake of transparency. Furthermore, factors such as patenting the technology or licensing options can further underpin the business case.

⁶ The abbreviation stands for *zero-knowledge Succinct Non-interactive ARgument of Knowledge*. Generally speaking, zero-knowledge proofs aim to prove the statement 'this transfer of assets is valid' without revealing anything important about the transfer itself. To do so, they make use of the basic idea that any computational condition can be represented by an arithmetic circuit which takes some data as input and gives an answer of 'true' or 'false' in response. We refer to [Ben-Sasson et al. \(2014\)](#) for the full explanation.

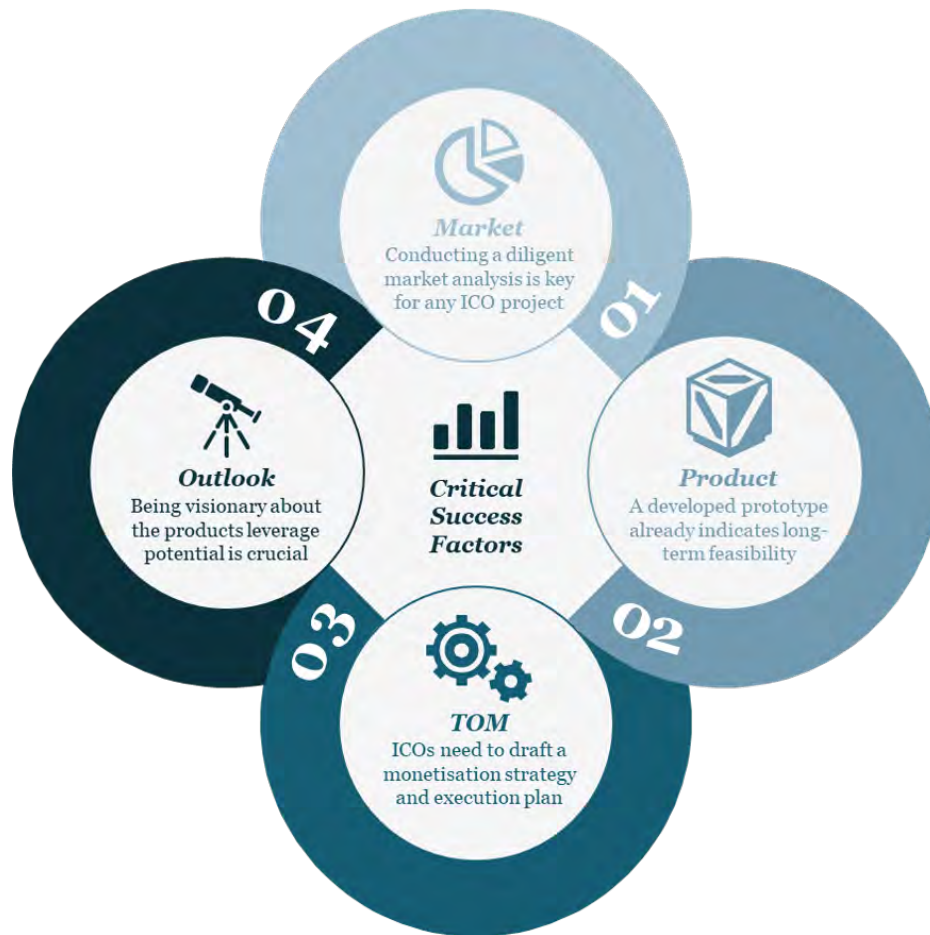


Figure 5 – The business case challenges entail the following dimensions: 1) market analysis, 2) product specification, 3) target-operating-model design, and 4) visionary outlook.

Target operating model In addition to the aforementioned basic requirements regarding the need for a market – which of course can also be created – and a product, a target operating model is required which defines how the product or the service is to be monetised. Only when sales are generated with a certain profit margin, ICO companies are capable to sustainably develop a successful business model medium- to long-term.

Outlook The blockchain technology still resides at an early stage and nearly every day new applications and ideas are revealed. For the business model it can therefore be decisive whether the product developed by the startup can be applied and leveraged to new medium- to long-term applications, such as in the areas of 'digital society' (e.g. e-government) or 'Internet of Things (IoT)'.⁷

⁷ The IoT cannot function without blockchain payment networks, where cryptocurrencies are the universal transactional language. We refer to [Tapscott and Tapscott \(2016\)](#) for further insights into the concept of 'Ledger of Things'.

3.3 | Legal challenges

As it has been observed in the past months (and to some extent years), various countries offer different levels of breeding ground for the promotion and growth of blockchain startups and therefore the proper assessment of the legal and regulatory environment is of utmost importance. For instance, while the extremely liberal legislation in Estonia significantly supports the constructive and sustainable promotion of blockchain startups, in particular in the fields of 'digital society', China has already demonstrated several times that the state is not (yet) ready to decentralise the control with its – as yet mostly temporary – prohibitions of cryptocurrencies, digital asset exchanges, or ICOs.

Further distinctions between blockchain startups can be made with regard to their legal structure, since, as a result of the currently not existing regulation, it is basically open to any individual to launch an ICO without the founding of a company or a foundation. A solid legal structure and a proper business setup increase credibility, support the long-term vision of the project, and safeguard the investments of investors.

3.4 | Governance challenges

Eventually, as a startup company in the blockchain space planning an ICO, handling the governance challenges shown in [Figure 6](#) efficiently and effectively is pivotal.⁸ Thence, diligently reviewing the startup implementation of the key governance pillars is essential to complete an ICO rating.

Team Beyond doubt, the most important component for the sustainable success of an ICO startup is its founders. The blend of experience, character traits, education, and complementary skills characterise the team – and without a team, neither a product nor a service is created. Well-selected strategic advisors with specific experience and skills complement the core team and contribute to the success with their support. Distinguishing features between startups start with the transparency or the authentication of the founding members and conclude in discussions about the optimal size of the team.

Transparency Transparency is the key word of a startup due diligence. This commences with the aforementioned team structure but furthermore needs to encompass the details on the funding plans, the roadmap, the code accessibility, and the business planning. Solely a full transparent package can provide sound credibility to investors.

⁸ Overall, if blockchains are to be sustainable in the long run, serious consideration of appropriate governance mechanisms are needed. The World Economic Forum and its new Center for the Fourth Industrial Revolution has recently published the foundational survey by [Tapscott and Tapscott \(2017\)](#) on blockchain governance challenges and multistakeholder cooperation opportunities, and the interested reader is referred upon.

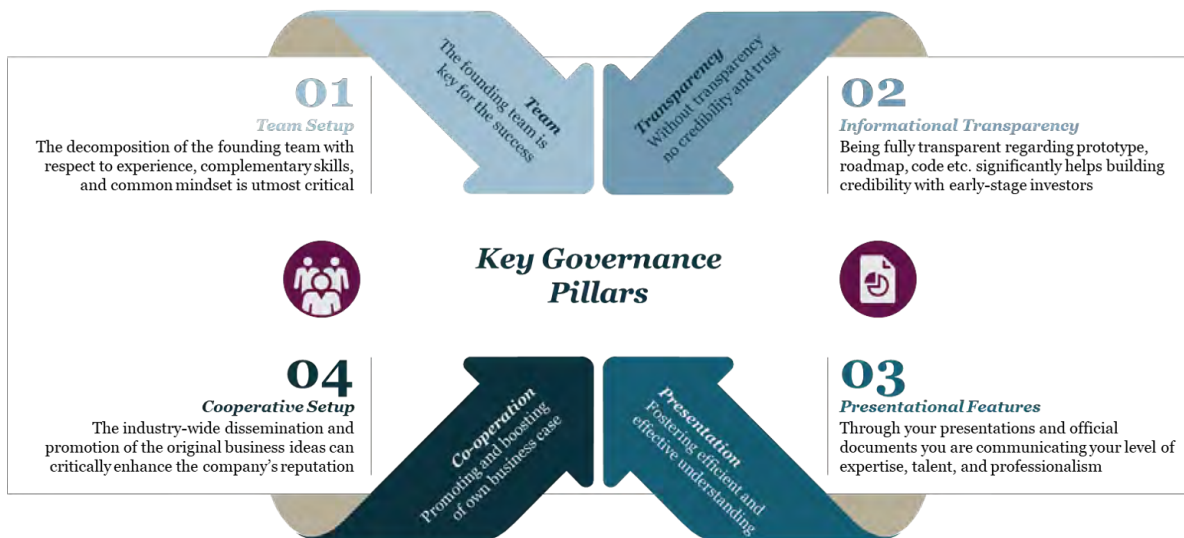


Figure 6 – The governance challenges entail the following (non-exhaustive) dimensions: 1) team structure, 2) information transparency, 3) presentation design, and 4) co-operation line-up.

Presentation Furthermore, not to be forgotten after all technical- and business-relevant aspects is the way the startup presents itself to the public – both to potential investors and users/customers. In addition to the public appearance on the internet via the website, public relations work, and participation in competitions and congresses, the main emphasis is on the white paper. In addition to the actual content, a clear structure, a logical sequence, and a reader-friendly presentation and formulation have to be taken into account.

Co-operation Eventually, co-operation with consortia and partnerships with strategic partners not only increase the publicity of a project, but are often a kind of third opinion by experts. Maintaining a constructive feedback loop and incorporating such independent perspectives is pivotal for startups. Moreover, these relationships can lead to easier market access, to product and service scalability, and further financial support. Thus, they represent a crucial dimension to promote a sustainable startup in the long run.

4 | Vision: it is time for transparency

Blockchain is the leading technology that will shape society for the next decades.⁹ After the internet has ensured that information has been democratised over the last 20 years, the blockchain technology now assures the democratisation of values. While blockchain may not prove to be a unique or optimal solution to all business, societal,

⁹ We are convinced that the further megatrends IoT and artificial intelligence (AI) can only function efficiently in the long run with a data network structure provided by the blockchain technology.

or organisational problems, the span of possible applications is almost unlimited. Since the blockchain technology is still in the fledgling stages, it is of utmost importance to promote the sustainable development of this promising technology.

That is why the team working on Alethena confidently assumes that at present, most likely, the one solution, the one prototype, the one project representing the decisive value driver does not exist – rather it is the aggregation of the individual projects which leads the technology into its next development phase. It can be expected that the creative destruction (popularised by Joseph Schumpeter in economics) will also decisively influence this development which is why numerous projects will disappear sooner or later. Therefore it is imperative to focus on inclusive systems that support the sustainable development of blockchain.¹⁰

Due to the increasing number of ICOs, investors are finding it increasingly difficult to filter out the most promising and profitable projects among a multitude of projects. Also, in many cases an investor lacks specific in-depth competencies in various assessment areas and is too short on time in order to accurately elaborate the entire case and get the critical insights on all decisive dimensions.

The team of Equility AG has set itself the mission of making the cryptomarket, including cryptocurrencies and tokens (or betimes called crypto-assets), more transparent and investments therein more sustainable in the long run. To this end, the current core element of Alethena was developed: a prototype of a due diligence methodology that allows to evaluate and rate ICO- and post-ICO projects based on a large number of factors derived by the challenges discussed in [Section 3](#). As the number of new projects and thus the volume of data over the coming months and years is likely to continue to rise sharply, it is inevitable to finalise these prototypes, i.e. ICO- and post-ICO rating models, in a first step and then to continuously enhance them using new technologies such as AI. In the medium- to long run, it will be inevitable to decentralise various rating factors through smartly incentivised and balanced crowd involvement. In order to stabilise this process, crowd features will be incrementally developed and, after thorough beta testing, ATH token holders will be able to vote on their inclusion into the standard rating methodology. Since part of the information aggregation can be automated by self-learning algorithms, we aim to develop continuous and highly informative crypto-research at a reasonable price and share it with the public via ratings to enhance transparency as the fundamental right of value democratisation.

5 | Project Alethena

In order to adhere to our own rules of transparency, we provide the details of the project Alethena hereinafter. As a short side note, Alethena is a combination of the terms

¹⁰ The compelling and elegantly argued new theory of [Acemoğlu and Robinson \(2012\)](#) revealed that in order for nations to prosper, citizens need 'inclusive institutions' which create virtuous circles of innovation, economic expansion, and more widely-held wealth.

'Aletheia', the goddess of truth, and 'Athena', the goddess of wisdom, and therefore precisely reflects for what we stand for.

5.1 | What is provided with Alethena? – the service offering

As has been elaborated on in the previous sections, the focus of the project Alethena thoroughly lies on developing a fully-fledged and proper due diligence organised as a platform business model, covering the ICO- and post-ICO market. Thus, as depicted in [Figure 7](#), Equility AG plans to develop the following service offering with the Alethena platform:

- **Supply side: analysis and rating**
 - an initial rating, remunerated by a one-time fee, for upcoming ICOs,
 - extended by an ongoing post-ICO listing possibility by quarterly paying a revaluation fee.
- **Demand side: investors information portal**
 - personalised user page with access to detailed information about the analyses against payment of a quarterly subscription fee,
 - extended by individual investment history tracking, insights on blockchain-based sentiment voting, and user-specific news aggregation.

The focus of our methodology are challenges that arise in consideration of the current conditions (cf. [Section 3](#)). Our rating scale ranges between 1 and 10, where the investment grade classification comprises the range 7 to 10. **To eliminate any conflict of interest, all ICO firms have to pay the same rating fee(s).**



Figure 7 – Alethena offers two services to ICO firms: 1) an initial ICO rating and 2) a post-ICO rating listing. In order to maintain an ample credibility, a combination of both services is highly recommended. Furthermore, investors receive access to detailed information about the conducted analyses and further personalised insights.

5.2 | Why does Equility AG need funding for Alethena? – the business plan

After having prototyped a proper diligence methodology, we are very confident that Alethena exhibits an ample long-term potential and meets a critical market demand. To date, all investments – in terms of time and money – have been funded by the founders. However, the project has now reached the tipping point where the full commitment of the core team is required and a growing team size has to be considered in order to meet the desired technology refinements and scalability developments of the Alethena rating platform. **The assurance of the sustainable and high-quality solution progress is to be done by means of an ICO via an Alethena smart contract, abbreviated by 'ATH', placed on the Ethereum blockchain.** The minimum target for the fundraising is CHF 3 million and is limited to the top at a maximum of CHF 30 million. As our target is to become the leading global ICO rating agency and time to market is pivotal, higher raised funds would allow quicker progression, increased scalability, and swift geographical expansion. CHF 30 million is the maximum amount that is economically justifiable in order to create long-term value to token holders. From a bottom line perspective, Alethena can be run with the soft cap amount of CHF 3 million.

Overall, the business scenarios outlined below are designed in such a way that the minimum initial funding is sufficient to remain operationally live within the least planned framework of two years. As the amount of funding increases, the time frame for the initial funding will be extended to up to four and a half years. Contingent on the funding amount and the corresponding time scope, different target states are set. With the floor amount of CHF 3 million, the project will be carried out with the minimum resources required which also limits the integration of new technologies however. **Additional funding is generally employed to expand the team, to invest in the extending infrastructure (hardware, software, licenses, etc.), and to assure neat running operations.** Furthermore, all scenarios have been developed with the capability to reach break-even within three years taking into account the above-mentioned aspects. If a funding amount is achieved that is associated with a shorter time horizon, the planned costs will be reduced accordingly after the scheduled period has expired, so that the achievement of the break-even is not jeopardised. It is explicitly pointed out that these figures are based on forecasts and therefore subject to change, meaning it is possible they are not materialised at this level.

Revenue stream As already elaborated in [Section 5.1](#), Equility AG is about to develop the Alethena service platform with two-sided revenue streams by ICO- and post-ICO rating fees as well as user account charges. Specifically, the fee structure is decomposed into:

- a one-time ICO rating fee,
- a quarterly post-ICO rating listing fee, and
- a quarterly user account charge to access detailed information of the analyses.

Fund usage The detailed overview on the different cost blocks and the planned run rates in the various funding scenarios is provided in [Figure 8](#).

5.3 | To whom is Alethena directed? – the target audience

The Alethena project and our corresponding ICO are aimed at all investors, irrespective of the investment amount, that believe in the future of blockchain technology. With its business model, Alethena would particularly appeal to the investors who

- share and promote the idea of transparency and long-term sustainable development in the blockchain space,
- have too little time and/or lack specific competencies for in-depth due diligence and research, but still want to participate in the emerging and promising ICO market, and eventually
- are broadly open-minded regarding new technologies.

5.4 | How will Alethena scale and leverage the crowd? – the decentralisation strategy

The team of project Alethena strongly believes that inclusion of the crowd in the rating process is crucial. However, crowd-based, fully decentralised rating mechanisms directly implemented on a blockchain exhibit a number of challenges, e.g.:

- a peer-to-peer network is most vulnerable when it is still small, leading to a substantial risk of loss of trust,
- agents giving their opinion in a decentralised network typically have undisclosed side interests, and
- it is highly likely that refinements to the methodology need to be implemented which could lead to a hard fork

Project Alethena addresses these issues by starting out with a carefully designed, centralised due diligence methodology making it possible to establish a track record and grow a network of investors and supporters – the reader might be reminded of similar approaches such as running coordinator nodes in a new blockchain. This platform will then be expanded and improved with crowd-based rating mechanisms using the funds raised during our ICO. The ATH token holders provide stability by voting about the continuous integration of crowd features into the standard rating methodology (after a beta testing period). The complexity of these features will increase over time, starting with simple but effective metrics and leading to more elaborate features. In particular, we are convinced that, if sufficient care regarding incentives, diversification, and peer-review is taken, it is possible to establish decentralised rating factors that go far beyond crowd sentiment and hype factors, thus truly leveraging the expert knowledge abundant in the crowd but currently inaccessible to the common investor.

Funding Scenario (kCHF)	Current	3,000	6,000	9,000	12,000	20,000	30,000
Time Scope (Years)	0.5	2.0	2.5	3.0	3.5	4.0	4.5
Salaries	Continue with Current Team for Max. 6 Months, Costs Covered by Equility AG	Hire 1-2 Academically-Oriented Engineers and 1-3 Business Analysts	Extend Project Period for Minimum 6 Months and Hire Additional Business Analysts	Extend Team with Additional Academically-Oriented Engineers and Business Analysts	Extend Team with 1-2 Additional Academically-Oriented Engineers and Business Analysts	Extend Team with 2-4 Additional Academically-Oriented Engineers and Business Analysts	Extend Team with 4-6 Additional Academically-Oriented Engineers and Business Analysts
FTEs	4	9	13	17	20	27	37
Yearly Run Rate (kCHF)	84	980	1,380	1,780	1,980	2,780	3,780
Infrastructure	Prototype of Due Diligence Model	Develop Due Diligence Model, Office Space	Extend Scope of Due Diligence Model and Integrate Optimisations, Office Space	Develop Prototype for Machine Learning for Due Diligence, Office Space	Optimise and Finalise Prototype for Machine Learning, Office Space	Further Development and Integration of Artificial Intelligence (e.g. Deep Learning), Office Space	Development of Own Blockchain for Scoring Methodology, Office Space
Yearly Run Rate (kCHF)	10	150	240	300	343	500	667
Communications & Marketing	Currently All Costs Covered by Equility AG	Advertisement, PR, Representation and Operational Travel	Advertisement, PR, Representation and Operational Travel	Advertisement, PR, Representation and Operational Travel	Advertisement, PR, Representation and Operational Travel	Advertisement, PR, Representation and Operational Travel	Advertisement, PR, Representation and Operational Travel
Yearly Run Rate (kCHF)	-	75	120	150	171	250	333
Legal Services	Setup of Legal Entity	Audit, Fees for Legal Advisor	Optimise Legal Structure, Audit, Fees for Legal Advisor, Additional Efforts for Increasing Personnel (>12 FTE)	Optimise Legal Structure, Audit, Fees for Legal Advisor, Additional Efforts for Increasing Personnel (>12 FTE)	Optimise Legal Structure, Audit, Fees for Legal Advisor, Additional Efforts for Increasing Personnel (>12 FTE)	Optimise Legal Structure, Audit, Fees for Legal Advisor, Additional Efforts for Increasing Personnel (>12 FTE)	Optimise Legal Structure, Audit, Fees for Legal Advisor, Additional Efforts for Increasing Personnel (>12 FTE)
Yearly Run Rate (kCHF)	5	45	72	90	103	150	200
Operations	Accounting, Reporting	Accounting, Reporting, Webservices, External Service Providers	Accounting, Reporting, Webservices, External Service Providers	Accounting, Reporting, Webservices, External Service Providers	Accounting, Reporting, Webservices, External Service Providers	Accounting, Reporting, Webservices, External Service Providers	Accounting, Reporting, Webservices, External Service Providers
Yearly Run Rate (kCHF)	5	120	132	144	156	168	180
Annual Rate (kCHF)	104	1,370	1,944	2,464	2,753	3,848	5,160

Figure 8 – Overall, six ICO funding scenarios are deemed as appropriate. The costs are decomposed into salaries, infrastructure investments, communications & marketing expenses, legal services, and operational costs.

5.5 | Where does Alethena want to go? – the roadmap

Equility AG has prototyped a due diligence methodology that allows evaluating and rating ICO- and post-ICO projects based on the decisive technical, business, legal, and governance factors. This methodology is the current core element of the Alethena project. Since the number of ICOs is steadily increasing and part of the information aggregation can be automated by self-learning algorithms, we aim to develop continuous and highly informative crypto-research at a reasonable price. To attain a fully-fledged and proper due diligence platform, we are currently planning according to the following roadmap:¹¹

THE ALETHENA ROADMAP



¹¹ The roadmap is reflecting our current strategy but will be subject to further adjustments after successful completion of the ICO and hiring of the extended project team.

- May – Nov. 2018 • Further development of due diligence methodology with focus on technical analysis
- December 2018 • Release full product with v2.0 methodology; become top-of-mind Blockchain-Asset Rating in Europe
- 2019 • Enhance and scale methodology with machine learning and R&D department
- 2019 – 2020 • Release largely automated v3.0 product

6 | Token specifications and -allocation

In order to finance its operations regarding the Alethena project, Equility AG plans an ICO whereby tokens with limited voting- and profit rights are being issued. In return, Equility AG will receive the money equivalent to those tokens.

6.1 | Token system and issuance

Equility AG plans to issue tokens ('**ATH token**') on the Ethereum blockchain. ATH token is a token with limited voting- and profit rights.

The minimum amount targeted is CHF 3 million ('**Soft Cap**'). The Soft Cap is defined as the sum of the amounts raised during the ICO. In case the Soft Cap will not be reached, Equility AG reserves the right to add additional funding (e.g. venture capital and private equity via share- or token issuance) to successfully complete the ICO ('**Filling Up**'). If this Filling Up is not successful, all raised funds during the ICO will be paid back to the investors after coverage of accrued costs of Equility AG.

The maximum amount to be raised in the token sale is CHF 30 million ('**Hard Cap**'). After reaching the Hard Cap, the public token sale will be closed immediately. In case there is an oversubscription (because the public token sale could not be closed immediately), the oversubscribed amount is returned to the token holders within 90 days after the closing of the token sale. If the token holder fails to cooperate in the return of the oversubscribed funds, Equility AG reserves the right to donate the assets to the Swiss Red Cross.

All participants of the ICO will be asked to pay their investment amount in a currency of their choice from a list of pre-defined currencies (Ether [ETH], Bitcoin [BTC], Litecoin [LTC], U.S. dollar [USD], euro [EUR], or Swiss franc [CHF]) onto accounts owned by Equility AG. At the end date of the ICO (21 days after the opening of the ICO), the raised investment amount can be converted into fiat money at the prevailing exchange rates of that day. Contingent on the timing of the investment and the amount already

invested (buckets), investors can benefit from a bonus (35%, 20%, 15%, 10%, or 5%). **The conversion rate for the token generation is 100 tokens for CHF 1.**

As an example: The first CHF 500'000 invested will profit from a bonus of 35%, e.g. their investment will be treated as if they would have invested CHF 675'000 (500'000 × 1.35). They belong to Pool B (cf. Figure 9). For those investors, the total amount of 67'500'000 tokens will be generated (500'000 × 1.35 × 100).

6.2 | Token pools

The token generation is dynamic, that means the amount generated in Pool D and Pool E hinges on the amount generated in Pool A, B, and C. As depicted in Figure 9, there is a total of five buckets for the token distribution.

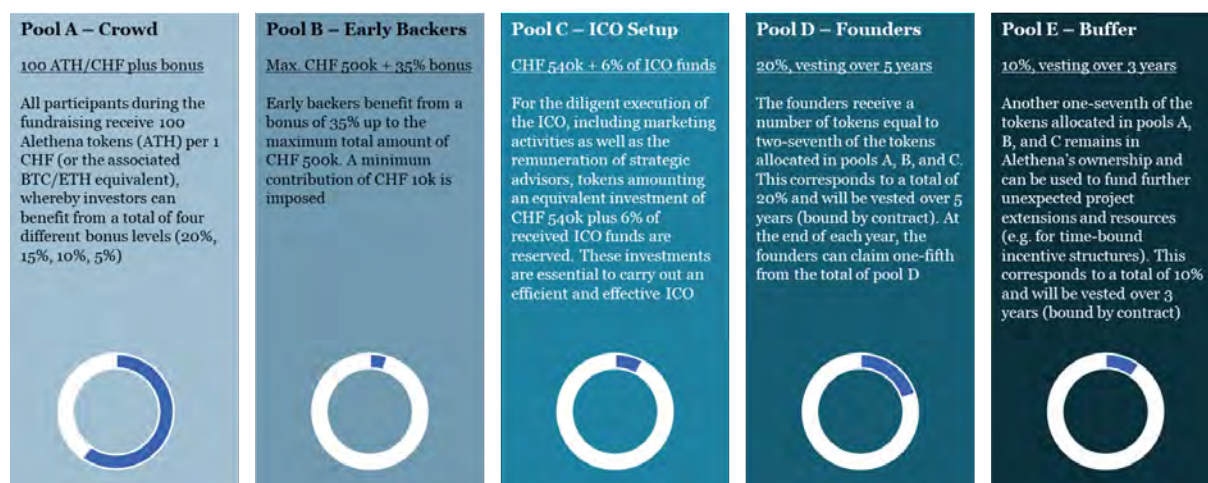


Figure 9 – The token allocation on Alethna's ICO is distributed over 5 pools: A) the crowd, B) the early backers, C) the ICO setup, D) the founders, and E) the backup buffer.

Pool B Early backers (**Pool B**) benefit from a bonus of 35% up to the maximum total amount of CHF 500'000 invested, whereby a minimum contribution of CHF 10'000 is imposed. An early-backer-investor therefore receives in addition to the initial exchange rate mentioned in Section 6.1, a bonus of 35 ATH to compensate him for the information asymmetry caused by the early investment. Thus, his purchase price is 135 tokens per 1 CHF invested. The total amount of tokens generated in Pool B is thus 67'500'000 tokens.

Pool A After that, normal backers (**Pool A**) will profit from a bonus of 20%, 15%, 10%, and 5%, contingent on the current block height (the time dimension will be measured in terms of Ethereum block numbers and not in terms of e.g. days). After the last bucket is filled (where the participants will receive a 5% bonus), the rest of

the tokens are being issued without any bonus, e.g. with the normal rate of 100 ATH tokens per CHF 1.

Pool C For the execution of the ICO, ATH tokens with the equivalent value of CHF 540'000 plus 6% of total received ICO funds are generated and reserved (**Pool C**), i.e. 54 million tokens $(540'000 \times 100) + 6\% \times (\text{funds received in Pool A and B}) \times 100$ tokens. The cost for the ICO is forecasted to be around CHF 800'000 with a material dependency on the overall funds size. These tokens will be used as payments for services provided within the ICO setup such as legal- and technical setup, smart contract verification, marketing activities and as well as remuneration of strategic advisors and other resources supporting the ICO process.

Pool D The shareholders of Equility AG will receive a number of tokens equal to 2/7 or 28.6% of the tokens allocated during the token sale, i.e. 2/7 or 28.6% of the sum of the tokens generated in Pool A, B, and C (**Pool D**). This corresponds to a total of 20% of ALL OUSTANDING TOKENS and will be vested over 5 years (bound by contract). At the end of each year, the Equility AG can pay out 1/5 or 20% of the tokens in Pool D in form of dividends to its shareholders. This number of tokens should be treated as compensation for the efforts during the preparation phase in 2017 and 2018.

Pool E Another 1/7 or 14.3% of the tokens allocated during the token sale, i.e. 1/7 or 14.3% of the sum of the tokens generated in Pool A, B, and C (**Pool E**), remains in Equility AG's ownership and can be used to fund further unexpected project extensions and resources. This again corresponds to a total of 10% of ALL OUSTANDING TOKENS and will be vested over 3 years (bound by contract). At the end of each year, Equility AG can claim 1/3 from the total pool of tokens.

Pool	Purchase Price	Maximum Amount of Tokens Generated	Notes
A1	120 Tokens / 1 CHF	To be determined; depending on block height	Bonus of 20%
A2	115 Tokens / 1 CHF	To be determined; depending on block height	Bonus of 15%
A3	110 Tokens / 1 CHF	To be determined; depending on block height	Bonus of 10%
A4	105 Tokens / 1 CHF	To be determined; depending on block height	Bonus of 5%
A5	100 Tokens / 1 CHF	3,000,000,000 minus tokens generated in A1, A2, A3, A4, and B	Hard cap (CHF 30 mio.) minus tokens already generated for A1, A2, A3, A4, and B
B	135 Tokens / 1 CHF	67,500,000	Bonus of 35%
C	No Purchase Price	54,000,000 plus 6% of the funds received in A1, A2, A3, A4, and B multiplied by one hundred	The amount of tokens generated here depends on the amount raised in other pools
D	No Purchase Price	28.6% of the sum of the tokens generated in pool A1, A2, A3, A4, A5, B, and C	The amount of tokens generated here depends on the amount raised in other pools
E	No Purchase Price	14.3% of the sum of the tokens generated in pool A1, A2, A3, A4, A5, B, and C	The amount of tokens generated here depends on the amount raised in other pools

Figure 10 – The token generation on Alethens's ICO is dynamically distributed and time-dependent through Ethereum's block heights during the bonus rounds.

6.3 | Rights of the token holders

Every token holder will have limited voting- and profit rights embedded in the legal structure of Equility AG:

By law, the general meeting as well as the board of directors of Equility AG has certain inalienable powers. These are listed in Art. 698 para 2, Art. 716a, and Art. 706b of the Swiss Code of Obligations (CO) and cannot be transferred to the token holders.

The annual general meeting of Equility AG decides, inter alia, upon the disposable profit (Bilanzgewinn) and the dividends for the benefit of the shareholders after having deducted the allocations to the reserves required by the law and the articles of association (Art. 698 para 2 section 4, Art. 674 para 1, and Art. 671 ff. CO). Moreover the general meeting may resolve on the formation of additional reserves (Art. 674 para 2 CO) and the board of directors is entitled to build up hidden reserves (Art. 716a para 1 section 3, Art. 960a para 4, and Art. 960e para 3-4 CO).

By determining the dividends for the shareholders the general meeting can also define a certain amount of the disposable profit to be distributed to the token holders (**'Profit Right'**). The token holders can then decide with a binding effect how they want this profit to be used and/or distributed (**'Voting Right'**). In the future, the board of directors can announce Voting Rights on certain matters with a consultative character.

6.4 | Voting procedure

If the general meeting of Equility AG allocates a profit to the token holders the board of directors will call an event for voting on this profit. This voting can explicitly take place online (**'Online Assembly of Token Holders'**). The board of directors of Equility AG will make a suggestion (**'Proposal'**) to distribute the profit among the token holders proportional to the amount of ATH tokens which they are holding at the beginning of the Online Assembly of Token Holders. Each token holder which is holding at least 10% of all the ATH tokens in circulation can make a different proposal (**'Change Request'**) which the token holders will also be able to vote on.

All the necessary information and announcements for the token holders will be published in the investor relations section of the Alethena website. Such announcements shall also include the date and time of the Online Assembly of Token Holders and how to participate. The profit payment and the amount per ordinary token in CHF as well as the applicable ETH/CHF exchange rate according to the proposal of the board of directors will also be published.

The Online Assembly of Token Holders lasts for two weeks and must be held not later than 6 months after the general meeting of Equility AG. Every ATH token in circulation has one vote. Locked ATH tokens cannot vote. The default vote is void. The Proposal or

a Change Request is considered to be accepted if the majority of executed votes within the predefined timeline accepted it.

If ATH tokens are being transferred during the ongoing Online Assembly of Tokenholders the Voting Rights of the recipient account remain zero and all Voting Rights remain with the sender account despite having less or not having any ATH tokens at the time of voting.

Within 90 business days of the conclusion of the Online Assembly of Token Holders, Equility AG will make available the respective payment amount (after accounting for withholding tax) to each token holder onto his/her public key subject to the condition that they provide all the information required for identification purposes (e.g. passport copy). ATH token holders shall receive these payments in ETH at the exchange rate specified by Equility AG.

6.5 | Token terms

6.5.1 | General terms

Issuer Equility AG, CHE–460.255.304, Dammstrasse 16, CH-6300 Zug. CHF 100'000 total share capital (fully paid-up shares).

ATH tokens ATH tokens are cryptographic tokens which confer a limited Voting- and Profit Right.

Token type Ethereum-based smart contract.

Soft Cap CHF 3'000'000.

Hard Cap CHF 30'000'000.

6.5.2 | Disclaimer

ATH TOKENS DO NOT REPRESENT OR CONFER ANY DIRECT OR INDIRECT (E.G. CONVERSION RIGHT) EQUITY STAKE OF EQUILITY AG OR ANY OTHER OWNERSHIP RIGHT, SHARE OR EQUIVALENT RIGHT, VOTING RIGHT OR ANY RIGHT TO RECEIVE FUTURE PROFIT SHARES, INTELLECTUAL PROPERTY RIGHTS OR ANY OTHER FORM OF PARTICIPATION IN EQUILITY AG AND ITS CORPORATE AFFILIATES OR ANY OTHER RIGHTS WHATSOEVER, OTHER THAN THE RIGHTS SET OUT IN THIS DOCUMENT.

6.6 | Risks

- I. The purchase and any other acquisition of ATH tokens carries with it significant risk. Prior to participation, YOU are required to carefully consider the potential risks and, to the extent necessary, consult a lawyer, accountant, and/or tax professional to evaluate the risk entailed. Do not overcommit.
- II. EQUILITY AG MAKES NO PROMISES OF POSSIBLE GAINS OR RETURNS. YOU will NOT RECEIVE ANY REPAYMENT of the fixed payment amount. Very likely, you will not receive a profit share amount during the investment phase of Equility AG. In case of default of Equility AG, a total loss of value of ATH tokens for token holders might ensue.
- III. ATH tokens are smart contracts on the Ethereum blockchain. YOU must access and use them using an Ethereum-compliant wallet. It is YOUR responsibility not to lose your ATH tokens by losing access to the keys that allow access to your wallet and/or allowing malicious third parties to access your keys and/or your wallet. EQUILITY AG WILL NOT BE HELD LIABLE FOR ANY LOSS OF TOKENS AND/OR OTHER DAMAGE INCURRED BY YOU AS A RESULT OF THE LOSS OF KEY OR ATTACK ON YOUR WALLET.
- IV. The field of digital cryptography is very new and associated with NUMEROUS RISK FACTORS, including but not limited to the volatility of cryptocurrency prices and markets in general, risks of systemic failure, risks of code failure, bugs, hardware failure, loss of data, theft, lost usernames, passwords or private keys, incorrectly executed transactions and/or hacks which can lead to, inter alia, the complete loss of the ATH tokens. In particular there is a risk of unforeseen attacks on several or all parts of the ATH token system, including the Ethereum blockchain. In the event of such an attack, you may LOSE all your ATH tokens. Moreover, it is possible that a group of people will take our software and modify it to accept a different set of tokens, or no tokens at all ('**Forking**¹²'). This could devalue ATH tokens. EQUILITY AG WILL NOT BE HELD LIABLE FOR ANY LOSS OF TOKENS AND/OR OTHER DAMAGE INCURRED BY YOU AS A RESULT OF REALISATION OF ANY SUCH RISK.
- V. The blockchain technology allows new forms of interaction and it is possible that certain jurisdictions will apply existing regulations on or introduce new regulations addressing blockchain-technology-based applications which may be contrary to the current setup of the ATH token and which may, inter alia, result in substantial modi-

¹² A fork is when a cryptocurrency's blockchain splits into two possible chains either because of a transaction or new rule for what makes a transaction valid. There exists a **hard fork**, which is a type of fork that renders previously invalid transactions valid, and vice versa. This type of fork requires all nodes and users to upgrade to the latest version of the protocol software. Furthermore, there exists also a so-called **soft fork**. A soft fork differs from a hard fork in that only previously valid transactions are made invalid. Since old nodes recognise the new blocks as valid, a soft fork is essentially backward-compatible. This type of fork requires most miners upgrading to enforce, while a hard fork requires all nodes to agree on the new version.

fications of the ATH token including its loss.

- VI. YOU carry the entire COUNTERPARTY RISK. Counterparty risk includes, but is not limited to, EQUILITY AG BEING LIQUIDATED due to bankruptcy whereas in such case your limited Voting and Profit Right will get WORTHLESS. Moreover, your limited Profit Right is always dependent on the performance of Equility AG and the Alethena project as well as the decision of the annual general meeting of Equility AG. Also, Equility AG might be acquired by another legal entity and Equility AG cannot make any representations with regards to the extent to which – if at all – the acquirer will uphold your limited Voting and Profit Right.

7 | Project leadership

We are a team of highly motivated and dynamic colleagues with the passion for innovation, broadly diversified skills, and the goal to redesign the future of the capital markets.

7.1 | Core team

Pascal Marco Caversaccio, Co-Founder & CEO



1990 Swiss-born blockchain enthusiast, entrepreneur at heart, and avid reader. Before becoming the Co-Founder and CEO of Equility AG, he was a Senior Strategy Consultant at PricewaterhouseCoopers (PwC) Switzerland supporting financial services clients in conceptual and hands-on delivery aspects of interdisciplinary strategic and regulatory projects. As an early adopter deep into cryptocurrencies and blockchain technology, he is convinced that the long-term success of this promising technology hinges on the mainstream adoption and therefore ultimately on the market transparency. In terms of education, he was a Ph.D. Candidate in Financial Engineering at the Department of Banking and Finance of the University of Zurich. Additionally, he holds a Master's degree in Quantitative Finance from the University of Zurich and the Swiss Federal Institute of Technology Zurich (ETH Zurich) and a Bachelor's degree in Business Administration from the University of Berne with major Finance.

Markus Hartmann, Co-Founder & President



Born in 1988 in Switzerland, entrepreneur and blockchain enthusiast with versatile experience in financial services industry. Since starting his first job in universal banking after high school, he has focussed on developing a strong curriculum with a well-diversified treasure trove of experience. Markus holds a Bachelor's degree in Economics and a Master's degree in Banking and Finance from the University of Zurich whereof he spent one semester abroad at the Fudan University School of Management in Shanghai. Before becoming the Co-Founder and President of Equility AG, Markus was a Management Consultant at Accenture Switzerland supporting clients in the fields of regulation, security, and governance. Driven by his sound skills for business analysis, regulatory standards for transparency, and startup valuation from his internship in a mid-size investment bank in China, Markus has started participating as an early-stage investor in ICOs. Considering the long-term potential of blockchain as a technology, he is convinced of the ultimate breakthrough and the imperative of successful and sustainable startups driving the development.

Tim Glaus, Co-Founder & COO



Tim Glaus, born in 1985 in Switzerland, holds a Master's degree in English Languages and Literatures from the University of Berne, a Master's degree in Banking and Finance from the University of Zurich, and was a Ph.D. Candidate in Finance at the University of Zurich. Furthermore, until recently he worked at ZZ Vermögensberatung AG, a hedge-fund management company specialised in emerging- and frontier market debt, where he held a position as Research- and Investment Analyst. Tim initiated his career at Credit Suisse in Zurich, Switzerland, where he worked in private banking at the Swiss desk, advising clients in financial- and investment solutions. Moreover, he worked at BlueOrchard Finance SA, an impact investment company, where he broadened his knowledge of alternative investments and contributed to a publication on the subject matter. Tim has a great interest in private equity investments and disruptive technologies which is why he is fascinated by cryptocurrencies and the recent developments in the ICO market.

Alexander Thoma, Co-Founder & CFO



Alexander Thoma, born in 1988 in Switzerland, holds a Master's degree in Banking and Finance from the University of Zurich and was a Ph.D. Candidate in Finance at the University of Zurich. Furthermore, until recently he worked at ZZ Vermögensberatung AG, a hedge-fund management company specialised in emerging- and frontier market debt, where he held a position as Research- and Investment Analyst. Alexander started his career at PricewaterhouseCoopers (PwC) Switzerland where he audited and valued firms in the trade, manufacturing, and technology industry. Thereafter, he joined Credit Suisse Switzerland as an Intern in the area of credit risk management where he significantly broadened his knowledge of corporate finance and firm analysis. Today, Alexander has found a great interest in cryptocurrencies and especially ICOs in which he built extended expertise as an investor and thus constitutes as a Co-Founder of Equility AG a highly valuable team member of the project Alethena.

Benjamin Rickenbacher, CSO



Benjamin Rickenbacher was born in Basel in 1992 and holds a Master's degree in Mathematics from the Swiss Federal Institute of Technology Zurich (ETH Zurich). During his studies, he was able to gain in-depth knowledge in a wide variety of topics ranging from pure and applied mathematics to computer science. Furthermore, he developed excellent communication- and presentation skills as a teaching assistant for which he received an award by the student body. He finished his studies at TU Vienna with a deep dive into optimisation- and operations research with a thesis on geometric aspects of optimal transportation. While working in the technology consulting practice at Accenture, Benjamin discovered his enthusiasm for the blockchain technology and decided to pursue this passion outside of the major corporation environment. At project Alethena he is now leveraging his scientific qualifications to evaluate the technical challenges of ICOs.

Leonard Dulay-Winkler, CMO



Leonard Dulay-Winkler, born 1987 in Germany, holds a CEMS Master's degree in International Management from the University of St. Gallen and the Koç University in Istanbul, and a Bachelor's degree in Business Administration and Economics from the University of Hohenheim in Germany. Before joining Alethena, he was part of Accenture's management consulting practice, specialising in the financial services industry, wealth management, and (IT) project management topics. Leonard is an experienced entrepreneur and has been involved in various startups and business projects, where he applied and refined his sound skills of business analysis, business strategy development, and problem solving. Leonard is a blockchain enthusiast and an early adopter of digital- and blockchain-assets. At project Alethena Leonard is leveraging his strategic marketing- and communications experience to drive Alethena's marketing strategy, communications, and media coordination.

7.2 | Strategic advisors

Prof. Dr. Thorsten Hens, Professor of Financial Economics



Thorsten Hens is Swiss Finance Institute Professor of Financial Economics at the University of Zurich and Adjunct Professor of Finance at the Norwegian School of Economics in Bergen. He studied at Bonn and Paris and held professorships in Stanford, Bielefeld, and Zurich. From 2007 to 2016 he was the Head of the Department of Banking and Finance of the University of Zurich and is a permanent member of the department's executive board. His research areas are behavioural and evolutionary finance. Thorsten Hens is ranked among the top 10 finance professors in the German spoken area (Germany, Switzerland, and Austria). In researching how investors make their decisions, Professor Hens draws on work in psychology and he applies insights from biology in order to understand the dynamics of financial markets. His consulting experience includes application of behavioral finance for private banking and evolutionary finance for asset management. He is a Founding Partner of Behavioural Finance Solutions, a spin-off firm of the University of Zurich. Professor Hens is a Consultant of the investment committee of the city of Zurich pension fund as well as the President of the investment committee of the Vita pension foundation.

Prof. Dr. Urs Wälchli, Professor of Finance



Urs Wälchli is the Associate Academic Director of Rochester-Bern Executive Programs and a Visiting Assistant Professor of Finance at the Simon School of Business at the University of Rochester, USA. He studied Finance and Economics at the University of Berne. After working in the financial sector, he joined the Institut für Finanzmanagement in 2001 as an Assistant Professor. He was a Visiting Scholar at the Wharton School at the University of Pennsylvania as well as the Stern School of Business at the New York University. He was a Visiting Assistant Professor of Finance at the Krannert School of Management at Purdue University between 2011 and 2016. Since 2015, he is a Visiting Professor of Finance at the Simon School of Business at the University of Rochester, where he teaches various courses in corporate and entrepreneurial finance. He is currently a Strategic Advisor at Thrive, a meritocratic and community-based premium advertising market place, and exhibits extensive experience in entrepreneurial finance, firm valuation, venture financing, and business planning.

Luzius Meisser, Crypto-Pioneer



Luzius Meisser is a computer scientist, economist, and recognised Bitcoin- and crypto-asset expert. He holds a Master's degree in Computer Science from the Swiss Federal Institute of Technology Zurich (ETH Zurich) and a Master's degree in Economics from the University of Zurich. In 2013, he co-founded the Bitcoin Association Switzerland – an active community of Bitcoin and blockchain enthusiasts – where he still serves as a board member. He has been following the development of Bitcoin closely since 2011 and has been an active part of the Swiss Bitcoin- and blockchain community. In December 2017, he became a board member of Bitcoin Suisse, a financial broker, asset manager, and service provider in the cryptocurrency space. Furthermore, he has published various articles on the current development in the cryptomarket and regularly serves as a speaker at crypto-conferences. In addition, he runs the economic research boutique Meisser Economics and teaches Agent-Based Financial Economics at the University of Zurich. He previously co-founded Wuala, a cloud storage startup, as its CTO and is seed investor of a few Swiss startups.

Israel Serrano Ortiz, Blockchain Expert



Israel Serrano Ortiz is a Senior Manager and blockchain expert at IBM Spain and is leading the corresponding blockchain initiatives and business development activities. Until recently he was a Senior Manager at Accenture Spain leading the consulting- and technology group in Iberia-Blockchain. Before joining Accenture Spain, he was a project manager, software engineer, and business analyst in the public sector. Currently he is helping companies in the definition and execution of their digital transformation journey, with a particular focus on blockchain initiatives, in various sectors such as financial services, public sector, health services, or communication media & technology (CMT). Also, he was leading the blockchain team at Accenture Liquid Studio that defines and implements relevant technical use cases and prototypes for disruptive business models. He also evaluates and implements proof of concepts in Ripple, Ethereum, Corda, or Intel Sawtooth Lake. Israel holds an Executive MBA from the Comillas Pontifical University and a Bachelor's degree in Telecommunications Engineering from the University of Alcalá.

Pascal Forster, Serial Entrepreneur



Pascal Forster has more than 20 years of experience in recruiting CEOs, board members, and senior executives for leading corporations and organisations. He worked for Dr. Bjørn Johansson Associates during a three-year period from 1998 to 2000 and re-joined the firm in 2003. Pascal was a Managing Partner at Forster Reichstein Associates from 2003 to 2008 and a Managing Director at Kienbaum from 2012 to 2017. He has co-founded a number of commercial and non-profit organisations, amongst which World.Minds, the XU Exponential University, and the Crypto Finance Conference. Since 2005 he is a member of the Investment Committee of Vita Sammelstiftung, one of the largest Swiss institutional investors. Also, he is a board member of the Crypto Finance AG since July 2017. Pascal is actively involved as an investor in a number of startups in the blockchain, retail, and education sectors. He received a B.A. in Social Sciences and an M.B.A. from the University of St. Gallen, and has studied Consulting and Coaching for Change at the Global Leadership Centre from INSEAD in 2005.

Prof. Dr. Robert LeMoyne, Professor of Biological Sciences



Robert LeMoyne is an Adjunct Professor for the Department of Biological Sciences at the Northern Arizona University of Flagstaff, Arizona; and he is an affiliate to the Center for Bioengineering and Innovation. Dr. LeMoyne earned his Ph.D. in Biomedical Engineering at UCLA during 2010. Subsequently, he served at Sandia National Laboratories. During his post-doctorate at Northern Arizona he continued with a prolific number of publications, for which he currently has published in excess of 100 technical proceedings, inclusive of two books, five book chapters, and many journal and conference publications. He has specialised in the domain of wearable and wireless systems for an assortment of healthcare applications, and his research team has researched, developed, tested, and evaluated novel brain computer interface applications. His machine learning acuity has manifested in multiple wearable and wireless system applications, in particular while consulting in Silicon Valley. Dr. LeMoyne is currently an active member of the Society for Neuroscience, a Senior Member of AIAA, and a Senior Member of IEEE.

Timothy Mastroianni, Cognitive Scientist



Timothy Mastroianni is an American cognitive scientist, inventor, founder, researcher, and author. He studied artificial intelligence, cognitive neuroscience, and cognitive psychology at Carnegie Mellon University in Pittsburgh, Pennsylvania from 2000-2005. From 2000-2002 he invented the first non-invasive application of machine learning using object recognition in computer vision for detecting, classifying, and extrapolating patterns and turning them into predictions. In 2003 he invented machine learning thought detection algorithms (the HiLo-Client software) that are currently being used world-wide to predict what a person is thinking about based on the neuronal firing patterns and networks in the human brain. Timothy is the founder of Cognition Engineering, a Pittsburgh-based research team currently developing solutions for the Allegheny Health Network (Department of Neurosurgery) and Leading Edge Consultants (Special Psychological Applications). From 2008-2018 he and his partner, Prof. Dr. Robert LeMoyne, have been researchers in bioengineering and biomedical devices.

Roger Halbheer, IT Security Expert



Roger Halbheer is the Chief Security Advisor for Microsoft in EMEA. In this role, he acts as a trusted advisor to C-level executives in the commercial- and private sectors and has established relationships with industry leaders, security communities and -governments, and intelligence agencies across the world. Roger is a regular speaker at industry events and has worked with national- and international print and broadcast media both to represent Microsoft and provide expert comment on security issues. Before re-joining Microsoft in 2018, he was a Managing Director for Accenture Security working in the Austria, Switzerland, Germany region and was additionally responsible for the global cybersecurity alliance between Accenture and Microsoft. Until 2015 he was the Head of Group Security (Chief Security Officer) at Swisscom. He was responsible for the security strategy of the overall Swisscom Group in close collaboration with the group's companies. Before, Roger was Microsoft's Worldwide Chief Security Advisor. From 2010, Roger led Microsoft's worldwide team of Chief Security Advisors who work with national organisations – including governments, law enforcement- and intelligence agencies – on information technology issues and strategies.

Alessandro De Carli, Technical Blockchain Expert



Alessandro De Carli is a mobile security engineer with many years of experience in the financial industry. He discovered the world of crypto during his master's thesis in the area of state channels and micropayment protocols at the University of Zurich. He holds a Master's degree in Computer Science and Economics from the University of Zurich. In 2015 he contributed to the micropayment transaction wallet CoinBlesk which was presented at the CeBIT 2016. Furthermore, he is the Founder and CEO of Papers.ch – a software engineering company offering services in the blockchain security area such as smart contract security reviews. Alessandro is also involved in the open-source crypto wallet AirGap and is the technical blockchain advisor of Aeternity, a top 25 cryptocurrency. In addition, Alessandro serves as regular speaker at crypto panels and -conferences.

Thomas Gustinis, Finance Expert



Thomas Gustinis received his EMBA from the London Business School and Columbia, holds a Bachelor of Science in Accounting, and is a Certified Public Accountant. He started his career at Ernst and Young in New York as an external auditor specialising in financial services audits and worked as an internal auditor and special projects controller for the CFO of Schroeders before joining UBS in 1998. During his 15 years at UBS, Thomas held the roles of the Location Controller for Stamford and Zurich, Head of Global Reporting for the Investment Bank in London, COO of the Investment Bank Treasury Function, and CFO of Group Treasury (Managing Director) in Zurich before joining Trestle Group as a Managing Partner in 2013. Thomas has 20 years of experience in regulatory compliance, risk management, and program- and project management where he enjoys focusing his attention on large-scale financial transformational initiatives.

Gary Sum, Business Development Asia



Gary Sum has been Chairman of the Swiss Capital Group since 2006, a Swiss heritage multi-family office with investment banking capabilities domiciled in 25 locations, totalling tens of billion dollar assets globally. Gary is a world-acclaimed international Swiss banker for 25 years, Chinese Merchants Award recipient, and patriotic banking professionalism recognition; founding president of a China state bank and executive in two Swiss banks; a serial entrepreneur and investor; a recognised chairman and keynote speaker in international financial summits. Gary got a cultural-political vantage point on China's multi-faceted development with his senior public offices in China, Big Bay, and the influential Chaozhou community globally. Gary is an inaugural patron donor of King's College leadership award and a tenor in classic repertoire.

Further information

For further information and answers to FAQs we would like to refer to our website www.alethena.com.

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