VETRI

VALUE YOUR DATA

VETRI is taking personal data management to the next level. At the core is a user-controlled digital identity solution allowing people to transact online securely and seamlessly while safeguarding all their sensitive personal data. Furthermore, VETRI can directly connect users with data consumers such as product and service companies, brands, researchers and advertisers. With the VETRI wallet, users can directly and easily start monetizing their personal data in a fully secure and controlled fashion on the VETRI marketplace. In return, data consumers gain direct access to reliable, anonymized data in a compliant and cost-efficient way.

IMPORTANT INFORMATION

This Whitepaper is provided by Procivis AG for informational purposes only. Nothing in this Whitepaper shall be construed as an offer to sell or buy securities in any jurisdiction, or a solicitation for investment, or an investment advice. The Whitepaper does not regulate any sale and purchase of VLD tokens (as referred to in the Whitepaper). The purchase of VLD tokens is subject to the Token Sale Terms and Conditions and the use of VETRI is subject to the Platform Terms and Policies.

This Whitepaper describes the current vision for VETRI. While we intend to attempt to realize this vision, please recognize that it is dependent on a number of factors and subject to risks. It is entirely possible that VETRI will never be implemented or adopted, or that only a portion of our vision will be realized. We do not guarantee or warrant any of the statements in this Whitepaper, because they are based on our current beliefs, expectations and assumptions, about which there can be no assurance due to various anticipated and unanticipated events that may occur.

Blockchain, cryptocurrencies and other aspects of the technology used for VETRI is in its infancy and will be subject to many challenges, competition and a changing environment. We will try to update our community as things grow and change, but undertake no obligation to do so.

Due to the retrospective nature of regulatory action or guidance, we can make no guarantees re-garding the legality of VETRI or the VLD token launch in any given jurisdiction. We must operate VETRI in accordance with the laws of relevant jurisdictions. As such, VETRI or VLD tokens may not be immediately available in certain countries.

VLD tokens are functional utility smart contracts within the VETRI platform. VLD tokens are non-refundable and are not for speculative investment. No promises of future performance or value are or will be made with respect to VLD tokens, including no promise of inherent value, no promise of continuing payments, and no guarantee that VLD tokens will hold any particular value. VLD tokens are not securities and are not a participation in the Foundation (once established) or Procivis AG. VLD tokens hold no rights in the Foundation (once established) or Procivis AG.

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GLOSSARY

Data consumers	Entities receiving and using data sets. In the context of VETRI, this would typically be companies conducting research, surveys or digital advertising campaigns.
Demographic data	Socio-economic data such as age, income, education and employment, which represent specific geographic locations for a specific time period.
eID+	Procivis' digital identity platform, which allows governments to deliver online services to their citizens and residents via secure and government-attested identity data.
ITO	Initial Token Offering of VLD tokens by Procivis AG.
Procivis AG	A digital identity and e-government services provider founded in Zurich, Switzerland, in October 2016. Referred to as Procivis.
Psychographic data	Data used to describe consumers based on psychological attributes, such as personality, values, opinions, interests, attitudes and lifestyle.
Self-sovereignty	In the context of personal data management, self-sovereignty refers to the idea that the individual has full control over his or her personal data. It also implies that individuals no longer have to rely on one central authority, such as governments, for the accreditation of their identity attributes.
User	A user is a digital identity owner that controls his or her personal data via the VETRI wallet.
VETRI	VETRI is a self-sovereign, blockchain-based digital identity and personal data platform connecting identity owners with data consumers. Once completed, VETRI will operate as a not-for-profit, peer-to-peer, open source personal data management platform managed by the VETRI Foundation. The platform will consist of the VETRI wallet and the VETRI marketplace.
VETRI Foundation	Procivis will aim to create a Swiss-based Foundation governed by Swiss law in 2019.
VETRI marketplace	The VETRI marketplace connects identity holders and data consumers through blockchain smart contract technology and matches supply and demand commission-free.
VLD token	The VLD token "VLD" is the virtual currency unit on the VETRI marketplace.
VETRI wallet	The VETRI wallet allows identity holders to manage their personal data in a self-sovereign manner as well as to monetise that data using a secure, privacy protecting platform that they fully control.

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1 BACKGROUND

1.1 INTRODUCTION TO DIGITAL IDENTITY AND PERSONAL DATA

Just as the information in a passport identifies its holder for specific purposes, a digital identity, in its simplest form, is an online proxy for a real individual.[1] It can be used to identify the individual for many more purposes in our digital age than would be possible with just a paper-based passport. These attributes can represent the obvious: given and chosen attributes such as name, last name, passport number, address, along with other demographic data. Less obvious digital attributes are preferences, opinions and attitudes (psychographic data). Collectively, this information can be used to create a profile of a person, with varying degrees of certainty, or level of assurance (LOA), that indicates whether a particular person is indeed who they say they are, thereby allowing the holder of that identity access to services or resources at a physical location or online. The more strongly these attributes can be verified and linked to the real person, the more valuable such a digital identity can be to the citizens who opt to use it and to the parties who rely on it, and thus to the entire identity ecosystem. And just as a passport contains only a narrow set of identifying data, a digital identity also consists of only a narrow set of all the data related to a person (see figure 1). The much broader set of rapidly growing personal data available about an individual includes a lot of user-generated content, such as pictures and health-tracking data that can be directly or indirectly linked to an individual, for instance via the metadata contained within modern digital devices.

Figure 1 Digital identity vs. Personal data

The rapidly evolving relationship between personal data and digital identity is a growing concern for individuals and companies alike. Individuals are increasingly worried about forgoing both their privacy and their ability to control who has access to their personal data and what is being done with this information. Companies, on the other hand, fear that mishandling the data – be it through

their own, or third-party applications – could undermine their position as a trusted provider. The frequency and extent of known data security breaches at major corporations around the world show that data theft is a very profitable business. This is also a reflection of the inherent value of individuals' personal data. Hence, for digital identity systems to truly succeed and deliver on their promise, it is widely recognized now that a new paradigm is urgently needed.[2]

1.2 PERSONAL DATA TRENDS AND MARKET OPPORTUNITIES

1.2.1 CHANGING REGULATORY LANDSCAPE

In May 2018, a new European privacy regulation called the General Data Protection Regulation (GDPR) will come into force. It will apply to all businesses selling to, and storing personal information about, residents in Europe, including companies located on other continents.[3] The aim of this regulation is to give individuals more power over their data and less discretion to the organizations that collect and use it for monetary gains.

For instance, under GDPR, individuals will have the right to obtain confirmation from companies as to whether or not personal data concerning them is being processed, where and for what purpose. Further, they will have the right to a copy of their personal data being stored and processed, free of charge, in an electronic format. GDPR will also make it illegal for companies to promote marketing material to consumers without their explicit consent. Consequently, this will require companies to keep strict and auditable records for most of their interactions with existing and prospective clients.

Practically, the GDPR will have wide repercussions on the way businesses throughout Europe, and quite possibly beyond, handle data and their accountability for the process. The early spillover of this regulation from Europe to other jurisdictions is best illustrated by the new guidance issued by the Office of the Australian Information Commissioner (OAIC), stipulating that from May 2018, Australian businesses of any size may need to comply with the GDPR if they have an establishment in the European Union (EU), if they offer goods and services in the EU, or if they monitor the behaviors of individuals in the EU.[4]

While GDPR does create challenges for some businesses, it also creates opportunities. Companies that employ innovative, privacy-respecting ways of reaching out to customers, beyond mere legal compliance, are likely to build deeper trust and retain more customers than those that do not.

1.2.2 DIGITAL ADVERTISING: FAST-GROWING BUT PLAGUED WITH INEFFICIENCIES AND ABUSE

Individuals continue to increase their time spent using digital media, while advertisers continue to increase their ad budgets into digital channels. According the Interactive Advertising Bureau, marketers spent USD 72.5 billion on digital advertising last year, an increase of 22% from 2015, as Google and Facebook once again booked the lion's share of net new revenues. In the US, the digital advertising industry is projected to continue to experience remarkable growth through 2021 to reach almost USD 100 billion in annual revenue, with mobile and social advertising becoming the top destinations, the latter expected to double in size to USD 30.8 billion by 2021.[5] But for companies wanting to reach out to potential clients and who are having to budget for brand advertising, an excessive number of intermediaries must be taken into account. It is estimated that for every USD 1 spent on digital marketing, advertisers only receive 44 cents of value, the rest being absorbed by intermediaries.[5] Ever rampant and fraudulent malware and other malicious bots are further adding to the problems currently afflicting the advertising marketplace. In 2016, ad fraud created by internet bots was expected to have cost advertisers USD 7.2 billion, up from USD 6.3 billion in 2015.[6]

1.2.3 PERSONAL DATA TSUNAMI

The volume of personal data that is generated each and every day is mind-boggling. As the internet economy hums along, billions of connected devices, people, and sensors record trillions of transactions and behaviors.

Just as remarkable is the potential value of data. When gathered, analyzed, and connected, personal data has the potential to reveal patterns or enable practices that can transform businesses and societies. As discussed above, efforts to protect privacy tend to place a premium on the consent of the individual – best illustrated by all the "I agree" boxes one sees online. But the prevailing notice-and-consent approach has clear limitations: it fails to give people any understanding of, or genuine control over, how their information will be used.

Figure 2 This is what happens in an Internet minute[7]

1.2.4 CONSUMER BEHAVIOUR

While deriving an actual monetary value for one's personal data might still seem like an abstract concept, people are becoming increasingly aware that a great deal of money is being garnered from their personal data. In 2015, the data broker market alone amassed USD 156 billion from selling data that does not belong to them.[8] But it is not only data brokers who profit, far from it. Technology giants, chief among them Google, Facebook, Yahoo, Microsoft and Apple, reap hundreds of billions each year thanks to personal data generously handed over by individuals all over the world.

Consequently, an ever-increasing number of Internet users have resorted to active avoidance of aggressive advertising via the installation of adblockers.[9] But it isn't just adblockers that are causing advertisers problems; they also face increasing hostility from internet users who are tired of being targeted with dull and irrelevant ads. Recent results from Adobe found that 27% of Brits believed that digital ads have "gotten worse" and 54% viewed the content as "ineffective".[10] Interestingly, studies show that users who are able to manage and protect their privacy are up to 52% more willing to share information than those who are not - presumably because they feel empowered by being able to adjust their data sharing activities to their unique preferences. In conclusion, individuals either want no ads or relevant ads that fit their preferences.[10] And there lies the opportunity. And with recent advancements in virtual and augmented reality and their implications on the delivery of advertising, this need for ever more personalized and targeted advertising is set to significantly increase in the near future.

1.2.5 EMERGING SOLUTIONS FOR THE DEVELOPING WORLD

A very different opportunity presents itself at the other extreme of the identity spectrum. An estimated 1.1 billion people in the world are unable to prove their identity, for lack of any kind of official physical documentation.[11] For most of them, it is highly unlikely that they will ever be able to prove their identity using conventional means, such as accredited documentation from a governmental body. While these individuals certainly know who they are, they are often excluded from property ownership, free movement, and social protection simply because they are unable to prove their identity.

Beyond passports and birth certificates, identities are also records of our past, and they are amended over time along with the events in our lives. These events constitute a historical record, an irreplaceable ledger that is unique to us. By fusing one's historical records with blockchain and distributed ledger technology, we could very well see the emergence of credible solutions for those individuals lacking official identity documents.

1.3 PROCIVIS AG

Procivis was founded in October 2016 in Switzerland with a clear mission: to empower citizens across the globe by providing them with a trusted digital identity and full control over their personal data. There are different ways how Procivis goes about its mission. Currently, Procivis is working with governments to help them issue digital identities to their citizens and residents, based on its integrated e-government platform called “eID+”. With VETRI, Procivis is developing a fully self-sovereign identity and personal data platform, based on eID+ and backed by blockchain technology. VETRI will work independently of any central authority and puts the control over personal data back into the hands of the individual user.

A pilot version of eID+ will be delivered to the Swiss Canton of Schaffhausen in December 2017 and is expected to be followed by a full roll-out of the solution to its residents during the second quarter of 2018. Furthermore, Procivis is also currently working on several pilot programs for its digital identity platform with foreign governments and supra-national organizations. It is projected that, by the end of 2018, a significant number of people will be using Procivis’ digital identity solution on a regular basis. Consequently, it is expected that this existing and fast-growing user base for eID+ will significantly accelerate the adoption of VETRI as the next generation and fully compatible personal data management platform.

Procivis is proud to call Switzerland home. Switzerland is quickly becoming a global center where emerging cryptography, blockchain and other distributed ledger technologies and businesses can thrive in a safe, supportive, and vibrant environment, thanks to its progressive regulatory framework, deep talent pool and sophisticated infrastructure. Some of that talent have found their way into Procivis, which is composed of a world-class team of employees, founders and advisors who jointly provide unrivalled expertise in blockchain technology, data protection, security and e-governance.

Further information about Procivis and eID+ can be found on our website: www.procivis.ch

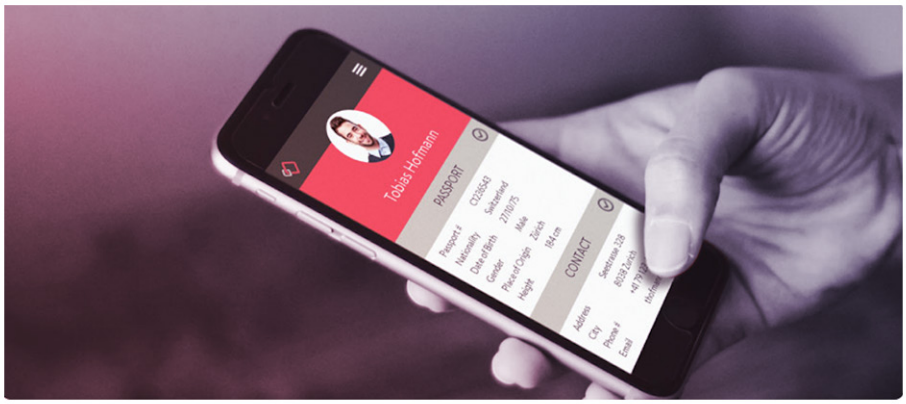


Figure 3 Procivis’ eID+

2 VETRI

2.1 OVERVIEW

Procivis, for the next iteration of its digital identity platform, intends to expand the digital identity sphere beyond personal attributes by encompassing the individual users entire personal data space. Credit card transactions, geolocation logs, browsing history as well as user-generated content are a few examples of personal data VETRI will help users control, safeguard and share when they so choose.

The VETRI platform will consist of a mobile wallet (VETRI wallet) for users to manage their personal data as well as a web application (VETRI marketplace) for data consumers to buy and access that data. Users and data consumers, who together form the "stakeholders", will be able to add data, request data form third parties, get their data verified, manage their privacy settings, buy services and finally share and monetize their data in a fully user-controlled fashion. This new ecosystem will also be decentralized and supported by innovations discussed in section 2.6 below. By delinking all personal information from other data-points a new level of privacy can be achieved.

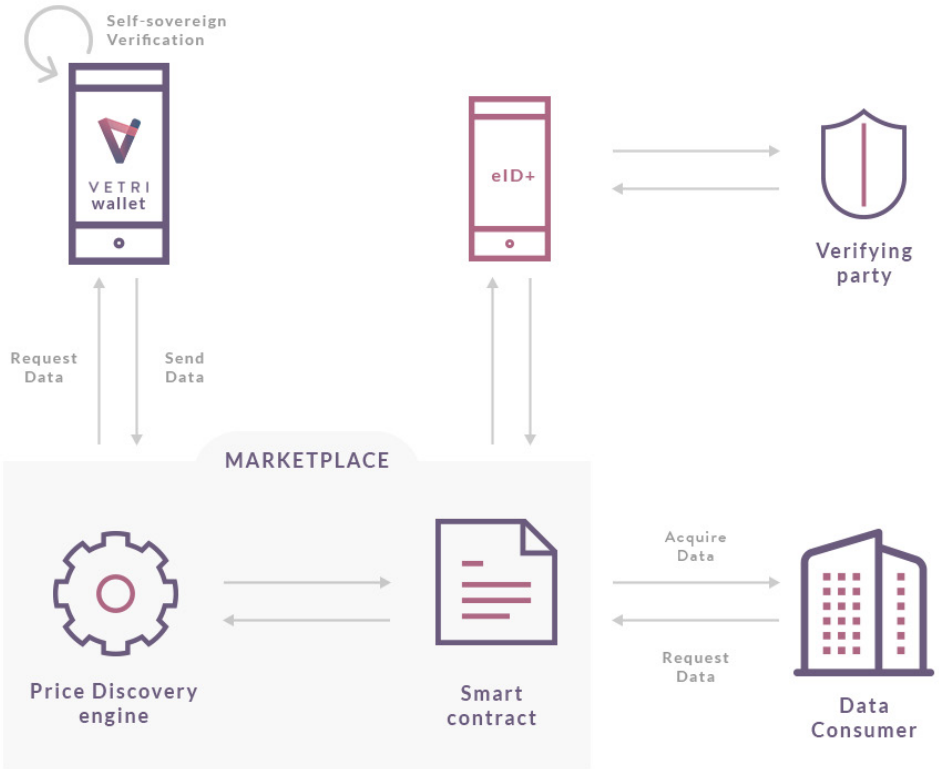


Figure 4 VETRI overview

VETRI's stakeholders have many profiles and take on multiple roles and missions. For instance, a credit card issuer can one day choose to directly advertise its products and services to users, propose a consumer survey the next or simply make an offer to a defined user pool to acquire their anonymized spending habits data. Finally, it can also help verifying users' identity attributes when and if prompted to do so.

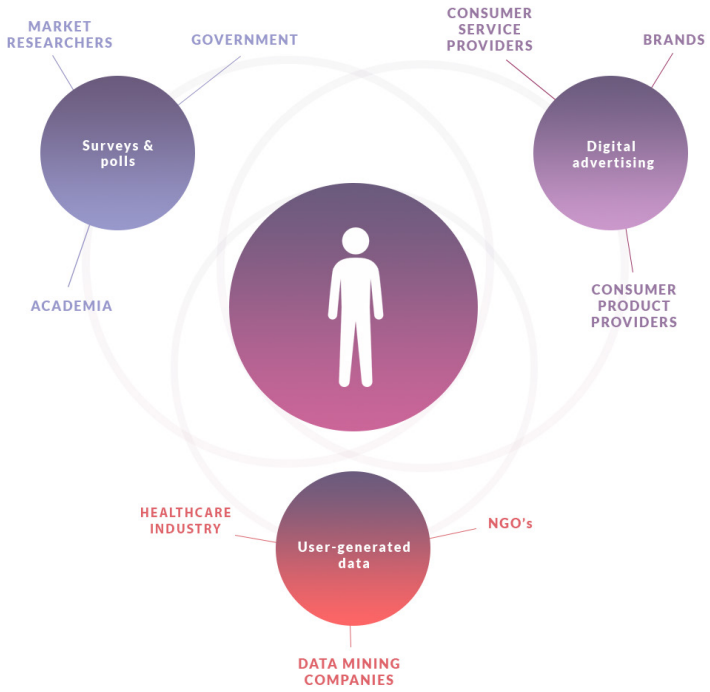


Figure 5 VETRI stakeholders shown as per type of data traded

2.2 VETRI WALLET

The VETRI wallet acts as a user interface between the user's data, the ecosystem and the VETRI marketplace where services are accessed and data is shared.

The main features of the personal data wallet are:

2.1.1 A SELF-SOVEREIGN DIGITAL IDENTITY FOR USERS TO BE AUTHENTICATED WITH

The VETRI digital identity solution is 100% owned and controlled by the user. No one else can read, use or take away the information it contains without the owner's explicit consent.

2.1.2 A DIGITAL VAULT TO SAFEGUARD USERS' DIGITAL IDENTITY AND SENSITIVE PERSONAL DATA

As a decentralized application interacting with users' personal data, privacy and security will be VETRI's number one priority. VETRI users will store their most sensitive data locally on their device by using state-of-the-art encryption techniques and the application itself will be locked by multiple factors of user authentication.

2.1.3 A GATEWAY TO THE VETRI MARKETPLACE WHERE USERS CAN MONETIZE THEIR PERSONAL DATA

Using their VETRI wallet, users can opt to share and grant access to their data on the VETRI marketplace as they see fit in a fully modular fashion. As a reward, users will be remunerated in VLD tokens based on the desirability of the shared data as perceived by data consumers and using straight-forward market-based pricing mechanisms.

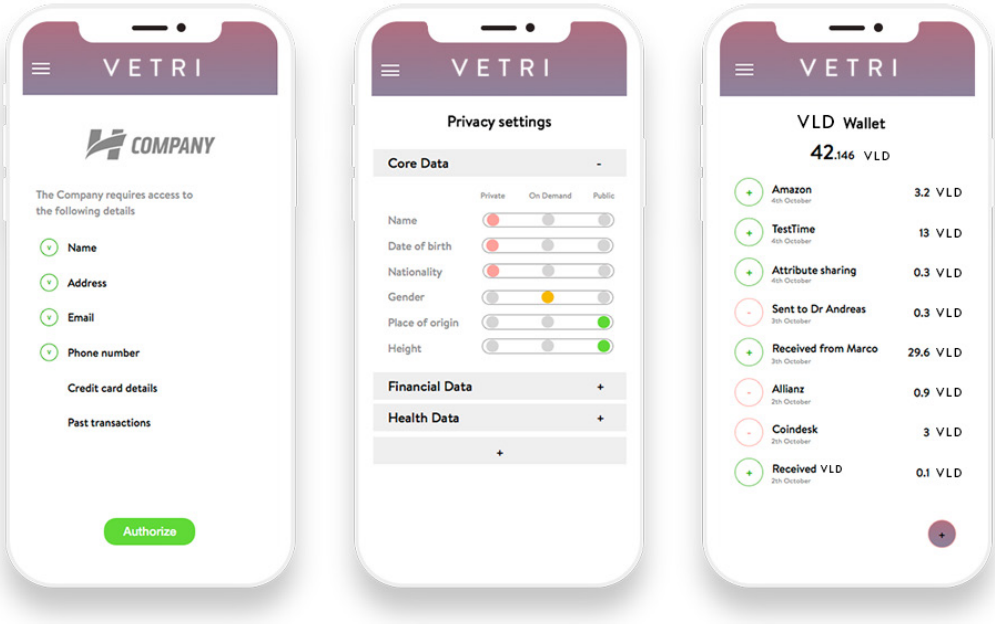


Figure 6 Privacy setting, personal data sharing request and VLD token wallet

2.3 VETRI MARKETPLACE

The VETRI marketplace is taking the concepts of personal data control and self-sovereignty one step further: as owners of their personal data on purchases, online browsing history or mobile data, users will also be able to choose whether or not to "sell" that data, with user-defined rights and restrictions implemented in smart contracts. To quote a Harvard Business Review's article titled "Blockchain Could Help Us Reclaim Control of Our Personal Data", this blockchain-enabled innovation "could shift the power of (and profit from) data management from big, established firms back to individual users".[12]

Digital marketers as data consumers do not need to know people's names, or contact details to run effective marketing campaigns. In fact, all they require is a certain assurance they can reach a desired target audience as defined by a combination of the users' demographic data, tastes and preferences (psychographic data). With VETRI, users will be able to pro-actively share anonymized demographic and psychographic data, thus enabling the creation of target audience filters on the VETRI platform for digital advertisers to use. However, with VETRI these advertisers can never read nor copy the information, but are simply assured that a defined pool of users correspond to their audience criteria and have consented to receiving advertising from them or from similar companies as specified by the users' interest and preference settings.

From the advertisers' perspective, the process is akin to marketing on Facebook and Google but from the users' standpoint, the differences are significant:

- Users will be remunerated instead of the intermediaries
- VETRI, by design, will not be able to access, read nor collect any information contained in users' wallets
- Similarly, companies conducting surveys and polls do not require users' identities and, in fact, are most effective and least biased when users are guaranteed anonymity

VETRI's user revenue model will be a function of the following parameters:

- The nature and reliability of data contained in users' wallet
- The privacy settings and sharing preferences as defined by the user
- The degree of desirability of any particular dataset, as perceived and bid for by participating data consumers

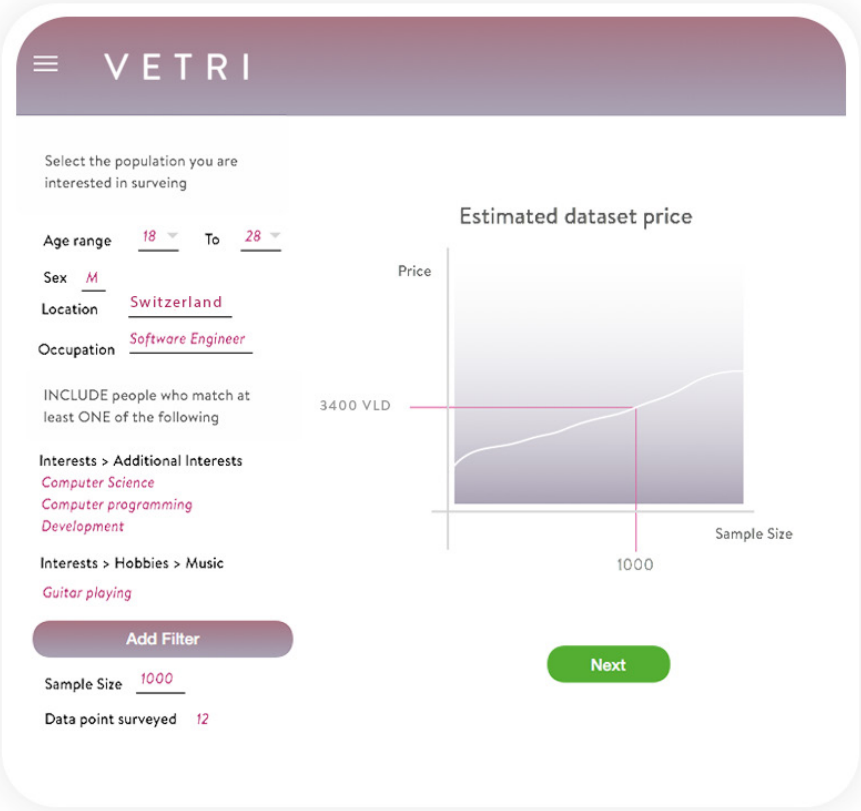


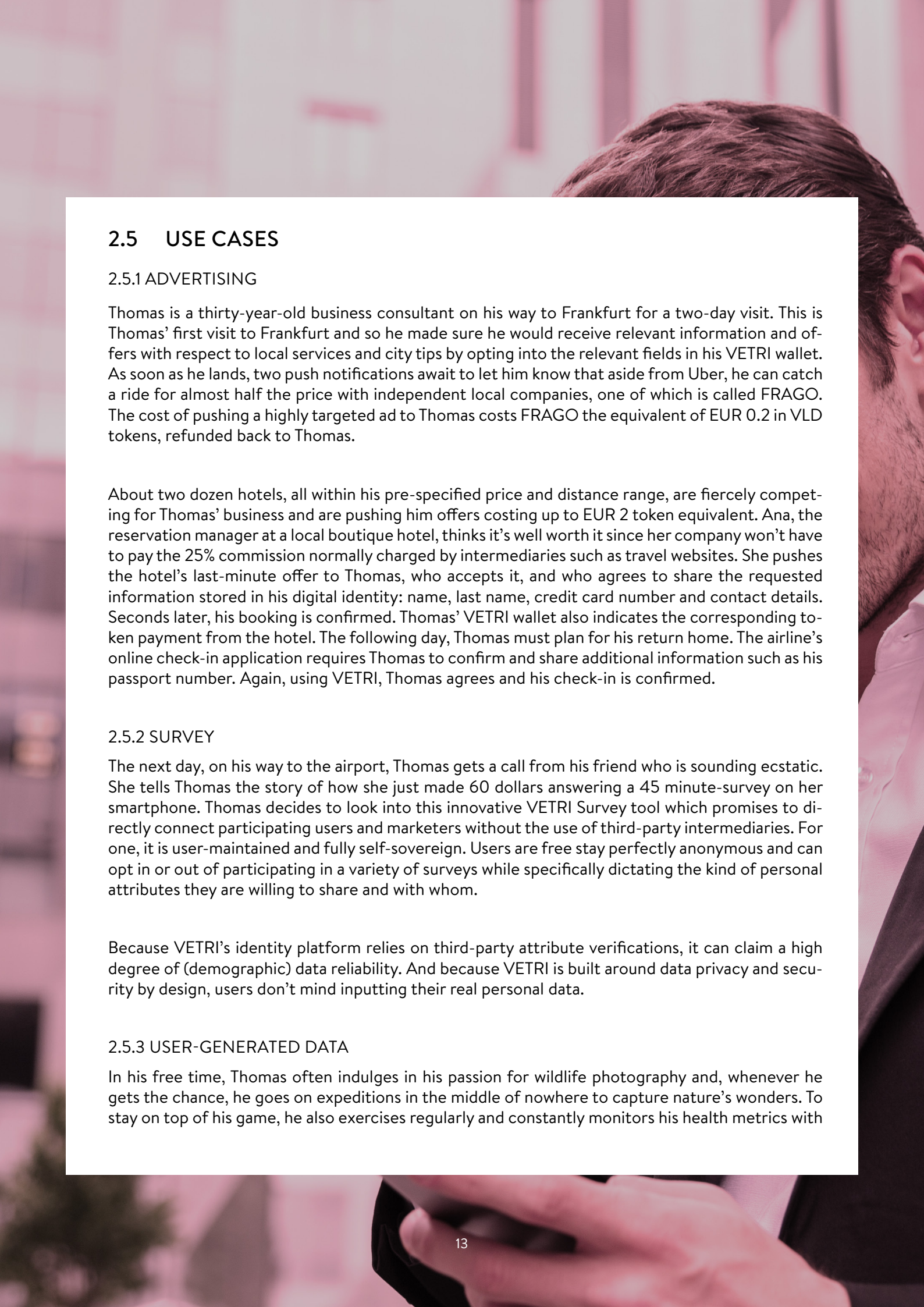
Figure 7 Illustration of an application that accesses VETRI marketplace to purchase personal data

2.4 VETRI FOUNDATION

VETRI will be designed as a not-for-profit, peer-to-peer platform. As such, Procivis will never be collecting any commissions or any kind of fees from either the transacting parties or for accessing the VETRI platform. Consequently, 100% of revenues generated via VETRI (net of blockchain transaction fees) will go directly to its users, in the form of token payments. Further, if legally permissible, Procivis will establish a Swiss-based Foundation governed by Swiss law by 2019. All software and applications developed for the VETRI platform will be rendered open source and transferred to the Foundation upon testing and completion of the platform in 2021. Under the Foundation governance, the VETRI platform will continue to be available to everybody, from data consumers to private individuals, for as long as they comply with VETRI's policies and ethical guidelines as defined by the VETRI Foundation and its governing bodies.

The Foundation's funding will be provided by a significant token allocation and be sustained by standard open-source licensing revenue models. In turn, Procivis AG, will continue to earn revenues from the sale and licensing of its eID+ solution to governments and semi-autonomous regions

such as Swiss cantons. Furthermore, depending on the success of the VETRI marketplace, Procivis AG, along with third-party service providers, intends to build value on top of the VETRI marketplace, for instance by offering VETRI wallet owners secure storage and other services that can be paid for with VLD tokens. Services for data consumers could also include the development of sophisticated analytics tools and smart contracts to optimize results from data gathering efforts.



2.5 USE CASES

2.5.1 ADVERTISING

Thomas is a thirty-year-old business consultant on his way to Frankfurt for a two-day visit. This is Thomas' first visit to Frankfurt and so he made sure he would receive relevant information and offers with respect to local services and city tips by opting into the relevant fields in his VETRI wallet. As soon as he lands, two push notifications await to let him know that aside from Uber, he can catch a ride for almost half the price with independent local companies, one of which is called FRAGO. The cost of pushing a highly targeted ad to Thomas costs FRAGO the equivalent of EUR 0.2 in VLD tokens, refunded back to Thomas.

About two dozen hotels, all within his pre-specified price and distance range, are fiercely competing for Thomas' business and are pushing him offers costing up to EUR 2 token equivalent. Ana, the reservation manager at a local boutique hotel, thinks it's well worth it since her company won't have to pay the 25% commission normally charged by intermediaries such as travel websites. She pushes the hotel's last-minute offer to Thomas, who accepts it, and who agrees to share the requested information stored in his digital identity: name, last name, credit card number and contact details. Seconds later, his booking is confirmed. Thomas' VETRI wallet also indicates the corresponding token payment from the hotel. The following day, Thomas must plan for his return home. The airline's online check-in application requires Thomas to confirm and share additional information such as his passport number. Again, using VETRI, Thomas agrees and his check-in is confirmed.

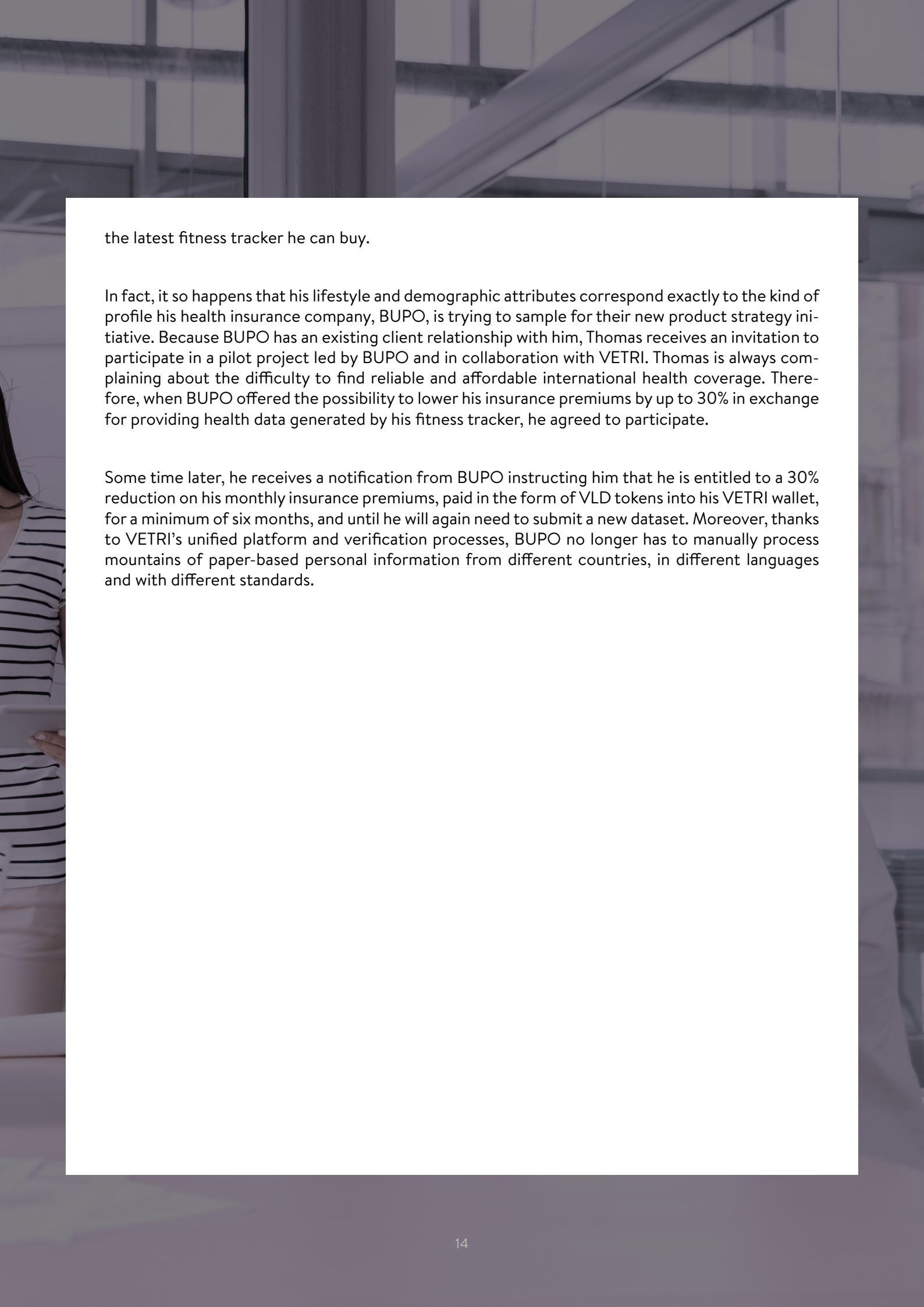
2.5.2 SURVEY

The next day, on his way to the airport, Thomas gets a call from his friend who is sounding ecstatic. She tells Thomas the story of how she just made 60 dollars answering a 45 minute-survey on her smartphone. Thomas decides to look into this innovative VETRI Survey tool which promises to directly connect participating users and marketers without the use of third-party intermediaries. For one, it is user-maintained and fully self-sovereign. Users are free stay perfectly anonymous and can opt in or out of participating in a variety of surveys while specifically dictating the kind of personal attributes they are willing to share and with whom.

Because VETRI's identity platform relies on third-party attribute verifications, it can claim a high degree of (demographic) data reliability. And because VETRI is built around data privacy and security by design, users don't mind inputting their real personal data.

2.5.3 USER-GENERATED DATA

In his free time, Thomas often indulges in his passion for wildlife photography and, whenever he gets the chance, he goes on expeditions in the middle of nowhere to capture nature's wonders. To stay on top of his game, he also exercises regularly and constantly monitors his health metrics with



the latest fitness tracker he can buy.

In fact, it so happens that his lifestyle and demographic attributes correspond exactly to the kind of profile his health insurance company, BUPO, is trying to sample for their new product strategy initiative. Because BUPO has an existing client relationship with him, Thomas receives an invitation to participate in a pilot project led by BUPO and in collaboration with VETRI. Thomas is always complaining about the difficulty to find reliable and affordable international health coverage. Therefore, when BUPO offered the possibility to lower his insurance premiums by up to 30% in exchange for providing health data generated by his fitness tracker, he agreed to participate.

Some time later, he receives a notification from BUPO instructing him that he is entitled to a 30% reduction on his monthly insurance premiums, paid in the form of VLD tokens into his VETRI wallet, for a minimum of six months, and until he will again need to submit a new dataset. Moreover, thanks to VETRI's unified platform and verification processes, BUPO no longer has to manually process mountains of paper-based personal information from different countries, in different languages and with different standards.

2.6 ENABLING TECHNOLOGIES

2.6.1 BLOCKCHAIN DISTRIBUTED LEDGER TECHNOLOGY

Blockchain consists of a continuously growing list of records, grouped in “blocks”, which are linked together using cryptography and together form a digital ledger. If a blockchain is used in the form of a distributed ledger, a blockchain can be managed by a peer-to-peer network collectively adhering to a protocol for VETRI validating new blocks, which, once recorded, can no longer be altered or revoked. This consensus-based mechanism built into blockchain removes the need for intermediaries and central authorities to run the system, thereby allowing two parties who do not know or trust each other to transact with one another.

Once a transaction is recorded on blockchain, it cannot be changed retroactively without also altering the subsequent blocks and in agreement with the network’s majority consensus. Blockchain is therefore immutable yet it provides full transparency as every participant can in fact audit everything that has ever been recorded. At the same time, participants are ensured privacy thanks to the pseudo anonymity shield blockchain provides.

Over the last few years, the concepts of “private” blockchains and “hybrid” blockchains have become popular as they offer more options in terms of system design. In private or permissioned blockchains, access is limited to a defined group of members. For this reason, they are also called, quite simply, distributed ledgers.

The hybrid approach involves tracking data modifications on a private distributed ledger but recording these changes on a public blockchain. In effect, the public blockchain in this example only acts as a notary for data modifications by verifying that they occurred, when they occurred (proof of existence or timestamping). As VETRI will be handling a very significant amount of data, using a hybrid approach is to our current knowledge the best option to overcome the processing limitations of public blockchains. VETRI is constantly monitoring the fast development of more performant Distributed Ledger Technologies (DLT), including built-in side-channels, more efficient consensus algorithms, and the reliability of various distributed file systems. Distributed Ledger Technology is still in its infancy and consequently, we expect major advances to take place at the protocol level. To deliver the best possible solution VETRI remains agnostic to underlying blockchain and DLT solutions at this moment.

2.6.2 SMART CONTRACTS

According to the inventor of Smart Contracts, Nick Szabo, a smart contract is a computer protocol intended to facilitate, verify, or enforce the negotiation or performance of a contract. One key feature of such contracts is that they allow pseudo-anonymous parties to enter into binding agreements, with each participant having full transparency on the agreement being made along with the certitude that they will be enforced.

It is in fact the algorithmic code itself that defines the rules and the penalties around the agreement, thus forgoing the need of a governing third party. In the case of self-sovereign digital identity management, smart contracts enable individuals to control and process their personal data on a public data marketplace. This allows individuals to choose what personal data to disclose to counterparties, giving businesses the opportunity to reach and interact with customers in a fully compliant and consensual manner, thus reducing liabilities while facilitating frictionless KYC.

2.6.3 CRYPTOGRAPHY

Public key cryptography is a technique that allows entities to securely communicate on a public network, and reliably verify the identity of an entity. Public key cryptographic systems use a combination of a public and a private key. The public key can be distributed widely but the private key is only known to its owner. Because all personal data is encrypted, optimal management of cryptographic keys is crucial for the overall integrity of the system. Users should be able to decide about the level of security he or she requires for key recovery, should it be needed. One possible solution involves storing key pairs on multiple devices, for instance a smartphone and a tablet or a PC. Another option will be to provide users with the possibility to delegate key management to trusted other participants where each participant has a portion of the private key.

To ensure optimal privacy and confidentiality, VETRI will be constantly evaluating advances made in cryptographic technologies, such a zero-knowledge proof technology (ZKP). ZKP is a cryptographic technique which allows two parties (a prover and a verifier) to prove that something is true, without revealing any information about what that something is. But because current ZKP systems are very resource intensive, VETRI intends to use off-chain computing to make the technology scalable and fit for its most advanced uses. In addition, we will be keeping a close eye on the development of homomorphic encryption, a technology which allows computations to be carried out on encrypted data (ciphertext) without first having to decrypt it.

Finally, ensuring the robustness of the cryptographic keys will be one of the main priorities of VETRI. With that objective in mind, VETRI will be using Elliptic-Curve Cryptography for signature generation. Bitcoin, Ethereum and other lesser known blockchain solutions also use Elliptic Curve Digital Signature Algorithm (ECDSA) for cryptographic signatures. One of the main advantages of ECDSA is that it uses shorter keys for the same level of security. This is important as more and more cryptographic transactions are carried out on more and more mobile devices with limited computational power.

2.6.4 MOBILE TECHNOLOGIES

Recent advances in broadband and touchscreen technology, computing power and the advent of open source operating systems like Android have all contributed to the domination and popularity

of smart mobile devices such as smartphones and tablets. The deployment of countless apps further increased the adoption of these smart devices. Because some of these apps store and process sensitive data, such as electronic wallets, they require proven security solutions.

For these reasons, VETRI will be storing sensitive information locally using a cryptographic module or a secure enclave in the main processor which safeguards the data it contains. In addition, interactions with the end user required for authentications further expose sensitive information such as a PIN, password or biometric identifier to the mobile operating system.

VETRI will be incorporating innovative multi-factor authentication features, such as biometrics technology using fingerprint and face recognition. We also intend to incorporate a behavioral biometric security layer as this technology is now mature enough to be used in production. In addition, NFC cards could also be added to VETRI's security protocol whenever highly sensitive transactions are performed on a mobile device.

In conclusion, throughout its IT architecture, VETRI will be committed to helping protect users with leading privacy and security technologies that are designed to safeguard personal information.

3 THE VLD TOKEN SALE

Role of the token	The VETRI token enables buy and sale transactions between users and data consumers on the VETRI marketplace and provides a unit of value
Maximum supply	1,000,000,000 - no new VETRI tokens will be created
For sale	500,000,000
Symbol	VLD
Price	1 VLD = 0.065 USD
Crowd sale period	Q1 2018
Accepted currencies	ETH / BTC / USD

3.1 ALLOCATION

50% of all minted VLD tokens will be offered for purchase to the public. The crowd sale will take place at the beginning of 2018 and stay open for 3 weeks or until the hard cap of USD 25,000,000 is reached.

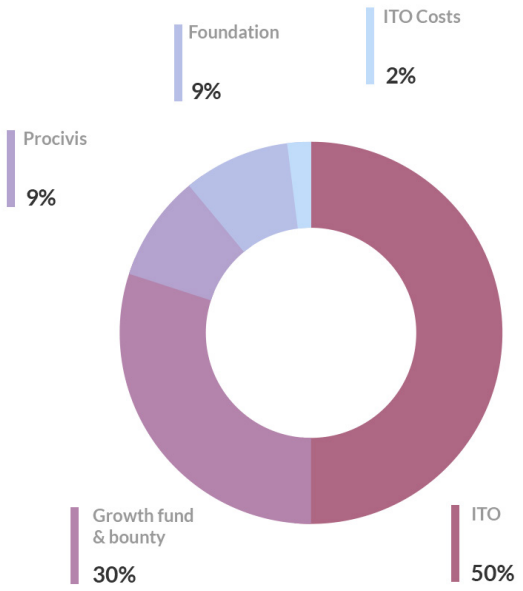


Figure 8 Token allocation

- A total of 30% of minted VLD tokens will be held in a growth fund to be used to incentivize users to participate in the VETRI ecosystem and to reward early adopters. This growth fund will also include a 1% allocation to a bounty program dedicated to the community's contributors of the VETRI ITO
- 9% of minted VLD tokens will be held in a reserve by PROCIVS AG for future employees' incentivization and third-party developers with sales restrictions of up to 3 years
- 9% of raised VLD tokens will be allocated to the VETRI Foundation (to be established) to ensure its long-term funding and to enable price stability mechanisms
- 2% of remaining VLD tokens will be allocated to compensate ITO advisors and partners

The total number of VLD tokens sold in the ITO will always make up for 50% of all minted tokens. All unsold tokens in the ITO will be burnt and proceeds from the token sale will be allocated proportionally as per the below cost category allocation.

3.1.1 PRIVATE SALE

A maximum of 60,000,000 VLD tokens will be offered to strategic buyers in the crypto community in a private sale process. The book-building process commences on November 3rd, 2017.

3.1.2 PRESALE

As part of a presale starting in January 2018, up to 100,000,000 VLD tokens will be offered to prospective buyers at a 25% discount. The VLD tokens to be sold during the private sale and the presale will be from the 500,000,000 VLD tokens for sale.

3.1.3 CROWD SALE

For a period of 3 weeks, starting in the first quarter of 2018, a maximum of 340,000,000 tokens will be available for sale according to the following discount scheme:

- First 20,000,000 tokens will be sold at 25% discount
- Then, for the first 24 hours of the crowd sale, tokens will be sold at a 20% discount
- Thereafter and for one week, tokens will be sold at a 15% discount
- The second week, tokens will be sold at a 10% discount
- No discount will be granted the final week of the crowd sale

3.2 USE OF PROCEEDS

Procivis being incorporated as an “AG” in Switzerland, it is subject to strict financial audit regulations and a high degree of transparency. Below is percentage breakdown of the anticipated cost categories related the development and marketability of the VETRI platform, estimated as of October 31st 2017.

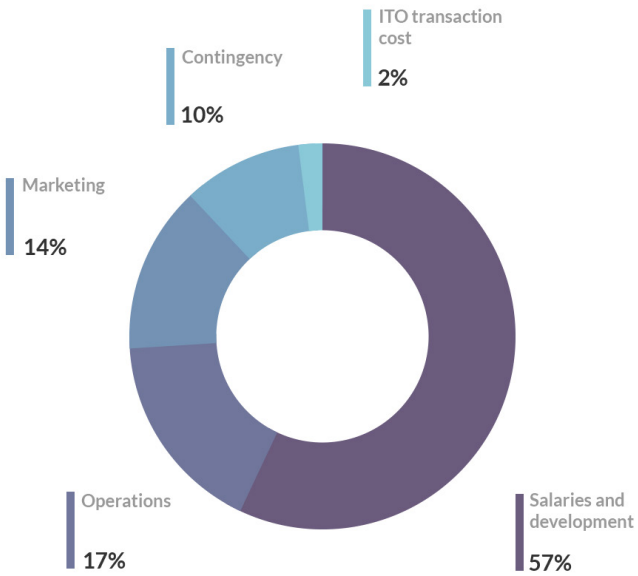


Figure 9 Proceeds allocation as per cost category

Salaries and development (57%) - The team consists of software engineers and business developers. This financing allows for the rollout of the VETRI platform, including the necessary adjustments to, and further development of, the existing eID+ platform.

Operations (17%) - Consists of VETRI sales, general and administrative costs (SGA) as well as legal compliance, security and infrastructure.

Marketing (14%) - Marketing will focus on expanding awareness among users, brands and advertiers.

Contingency (10%) - This is a set-aside for unforeseen costs.

Transaction Cost (2%) - Advisory costs related to the VLD token sale and other relevant transaction costs.

The envisioned use of proceeds described above are provided for illustrative purposes only, and Procivis AG and the VETRI Foundation (once established) reserves the right to allocate the resources, including proceeds from the sale of VLD tokens in a different way at its sole discretion.

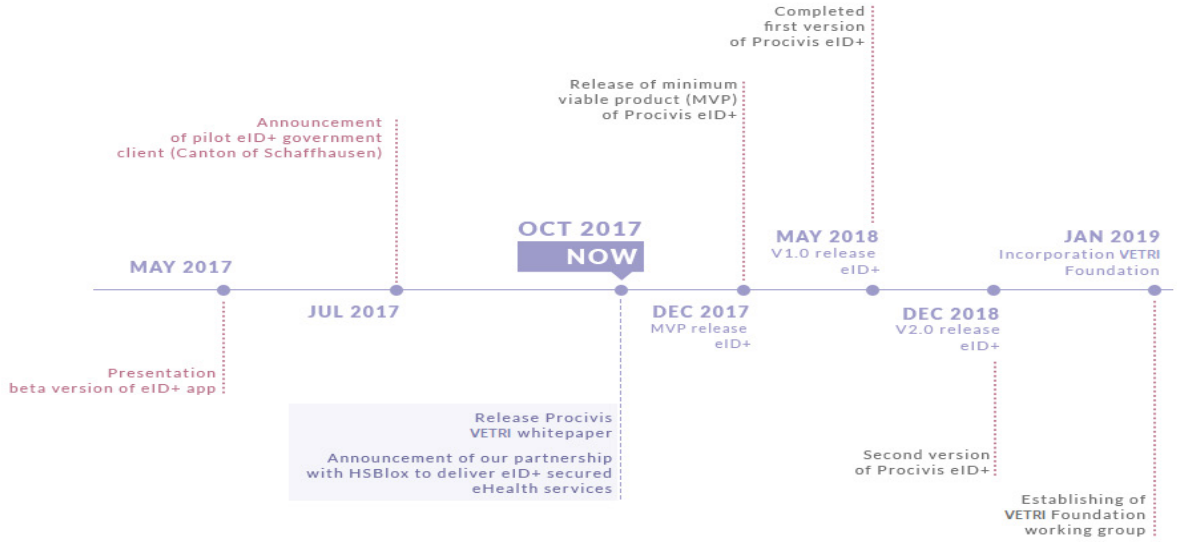


Figure 10 Roadmap 2016-2021

5 TEAM

5.1 PARTNERS

FRORIEP Lykke queo

5.2 CORE TEAM

Alexander Brozek
Systems Engineer

Daniel Gasteiger
Co-Founder & CEO

Krzysztof Adam Górski
Legal Analyst

Patrick Graber
Head of Business Development

Dominique Kunz
Community Manager

Dariusz Niespodziany
Senior Software Engineer

Adithya Pradeep Kumar
Business Analyst

Yves-Alain Petitjean
Co-Founder & CFO

Hanna Seibert
Office Manager

Sven Stucki
Software Engineer

Costa Vayenas
Senior Government Consultant

Giorgio Zinetti
CTO

5.3 EXTENDED TEAM

Lucas Betschart
President of
Bitcoin Association Switzerland

Thomas Bocek
Head of P2P and distributed systems at the University of Zurich

Malik El Bay
Blockchain Entrepreneur

Michael Guzik
ITO Advisor
Lykke Corp

Eva Kaili
Member of
the European Parliament

Ronald Kogens
Legal & Regulatory Counsel
FRORIEP Legal Ltd.

Guilherme Sperb Machado
Senior Software Engineer
& ITO Advisor

Monique Morrow
Co-Founder Humanized Internet
& Former Cisco CTO

Grégoire Notz
Managing Director
Notz Stucki Group

Guido Rudolphi
Cybersecurity Expert

Rolf Rauschenbach
Strategy Advisor
& Political Scientist

Christoph Rüdt
Strategic Communication
Ruedt Communication Consulting

Roger Wirth
Managing Director of
Information & Cybersecurity

Lili Zhao
Investor Relations Advisor

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