



**BLOCKCHAIN
TASKFORCE**

Strengthening the blockchain in Switzerland

The White Paper of the Blockchain Taskforce

Bern/Zug, April 2018



Preamble – From spark to bonfire

The internet revolution conquered the world as key stakeholders – in politics, business, and civil society – developed visions and brought us innovations such as email, the World Wide Web, Big Data, cloud computing and the first days of the Internet of Things. In the past two years, another new and highly innovative industry has emerged in Switzerland, devoted to similarly big goals. Hundreds of companies have settled between Zug and Zurich, in Geneva and in Ticino, to work on improving existing structures or to bringing new products and services to market. These companies are all based on a decentralized network through which trust and security can be created: the blockchain.

In the second half of 2017, politicians and public alike became aware of the Blockchain ecosystem, which came to be known as "Crypto Valley". The spark then fired up government circles in Bern. As policymakers there began to appreciate what was happening on their doorstep; they realised its enormous social potential. But the spark did not ignite enthusiasm alone; it also brought with it challenge and anxiety. The innovative power and dynamism of this technology is immense, and the price volatility of new cryptocurrencies has proved breathtaking, or surreal, depending on point of view.

The blockchain has contributed to much more than just the creation of digital currencies. More importantly, the technology opens vistas on a future in which the whole basis of exchange and trade are entirely rethought. It has the potential to serve as an everyday technology, creating a host of new possibilities.

What if these opportunities were to be fully exploited in Switzerland? What if start-ups trading on the country's brand are to enjoy a benign and dependable environment? What if regulation could mitigate fears and prejudices around the new technology? Were all these circumstances to occur, an inter-industry, interdisciplinary support structure would be needed.

The idea of a task force to tackle such challenges spread rapidly amongst leading figures from the economic sector, from industry, politics, science, society - and soon a multitude of stakeholders became involved. The Blockchain Taskforce was formed within a period of two weeks at the end of 2017, with the active participation of universities, companies, lawyers, Government Councillors, Councillors of States, and National Councillors. More than 50 individuals came forward to donate their time and insights under the patronage of Federal Councillors Johann Schneider-Ammann and Ueli Maurer.

Instead of debating what a good or bad blockchain future might look like, the work of our group is geared towards turning that initial spark into a bonfire – for the benefit of Switzerland and of the world.



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1. Organization of the Blockchain Taskforce

Achieving legal certainty within a reasonable period of time is the basic prerequisite for securing the major objective of the Taskforce, i.e. maintaining and enhancing the attractiveness and competitiveness of the blockchain site in Switzerland. To achieve this goal, four focus areas were identified, on the basis of which the working groups would later be formed: ICO/Tokens, Banking, Cybersecurity and Other application areas.

Following the first meeting of the Taskforce on 12 January 2018, the members were assigned to the working groups. The experts of all working groups quickly agreed that the focus of activities should lie on the first two subject areas, ICO/Tokens and Banking, so that the urgent issue of legal certainty may be addressed with high priority. This realisation led to the following schedule:

Working group	Priority	Topics	Results
ICO/Tokens	1	Transfer of tokens, MLA, Pre-Sale, Token map	Q1 2018
Banking	1	Opening of bank accounts, Issue map	Q1 2018
Cybersecurity	2	Under development	Q4 2018
Other application areas	2	Under development	Q4 2018

In addition to industry representatives, the ICO/Tokens working group also includes specialists from leading law firms in the blockchain sector. The swift, consistent and targeted approach by the members has significantly led to the successful definition of the main topics within the group. The present results handle the most urgent challenges and include concrete implementation recommendations.

In terms of specialization, a subgroup worked on preparing a comprehensive token categorization. The present document outlines a three-stage model, which will be completed in the upcoming months.

The Banking working group is examining the potential of blockchain technology in the financial sector and evaluating measures, so that blockchain companies can open business accounts in Swiss banks in the future. Until now, this has only been possible in certain occasions. The members of the working group come mainly from the banking sector and the blockchain industry, supported by scientists and legal experts.

The Cybersecurity and Other application areas working groups shall present their results in the fourth quarter.

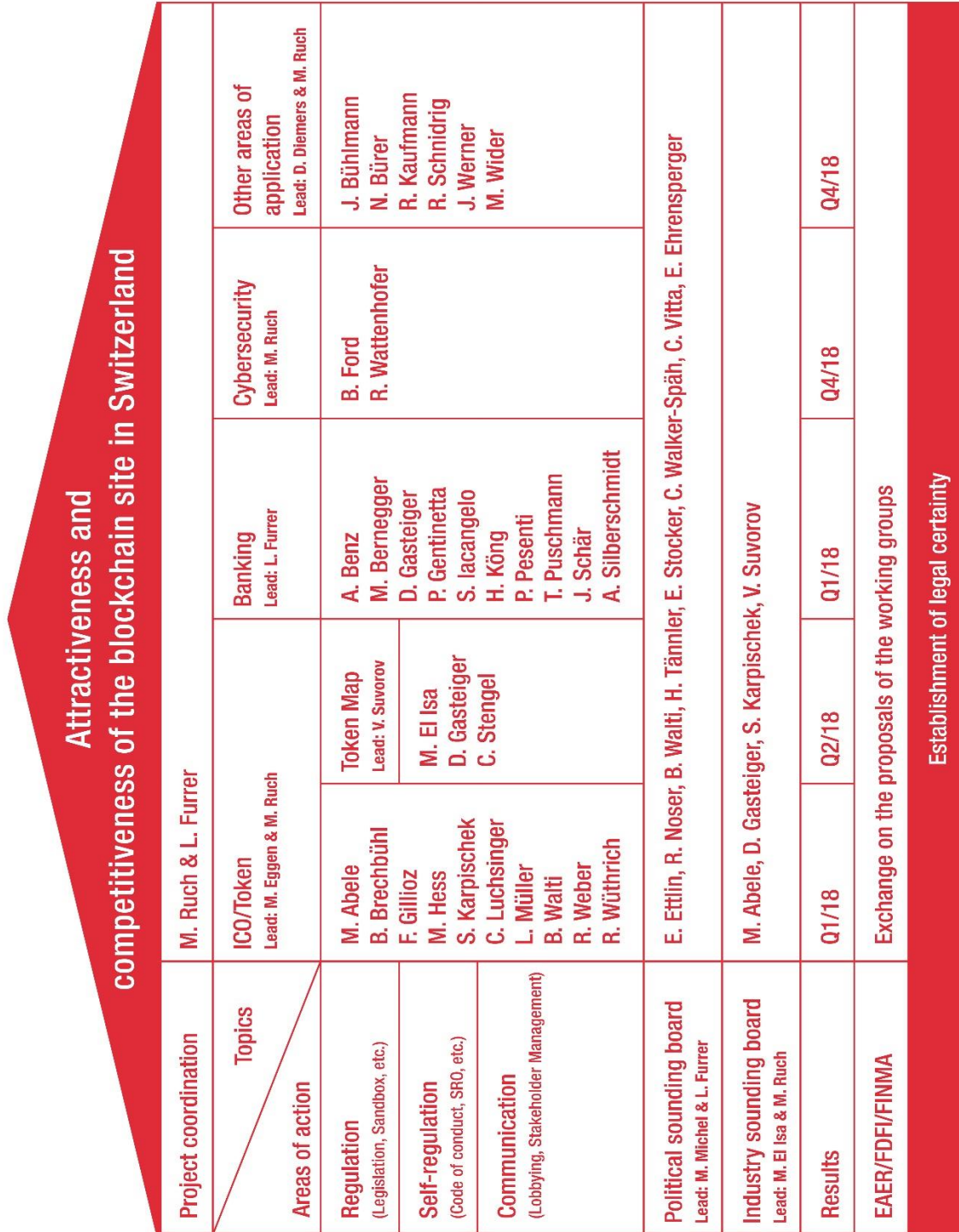


Figure 1: Blockchain Taskforce Organisation



2. Results of the working groups

2.1 ICO/Token

The ICO/Token working group has identified and worked on the three following main points for the present position paper:

- a. Transfer of tokens
- b. Application of the Anti-Money Laundering Act (AMLA) on tokens
- c. Application of FMIA and Banking Act on tokens

2.1.1 Transfer of tokens

The reliable and easy transfer of assets to the Blockchain is a key prerequisite for the economic exploitation and development of new technologies. Asset transfer currently occurs through the use and transfer of tokens. Legally, however, there are still uncertainties regarding this mechanism which make the commercial implementation of blockchain projects more difficult. Tokens are digital units that are inserted directly on a blockchain and exist as part of a position of a database (usually publicly viewable) that documents the existence and transfer of the tokens. Issuers can configure the tokens differently; hence, they can represent a wide variety of content or rights.

If tokens contain a claim against the issuer (e.g. the right to use certain services), then claims under applicable Swiss law must be transferred by way of assignment in accordance with Art. 164 et seq. of the Swiss Code of Obligations ("CO"), provided the tokens are not securitized or issued as intermediated securities. Technically, there is legal issue arising from such a transfer because Swiss law requires a valid assignment to be in written form (Article 165 (1) and Article 973c (4) CO for the transfer of uncertificated securities).

In reality, however, the transfer of tokens takes place only on the blockchain and informally, meaning without the validity requirement of the written form. Therefore, despite the representation of a claim in a token, such claim cannot lawfully be transferred by a mere database entry on the blockchain.

The above-mentioned issue could actually be solved by a revision of Art. 165 CO. The written form requirement for an assignment does not appear to be compelling, especially since other legal systems (such as German law) do without. However, a legislative proposal could face resistance from the consumer side; in any case, this option should be kept in mind from legal and political perspective, eventually with a waiver of the written form limited to e.g. digital transactions only).

Unless the above-mentioned written form requirement is met (as required for the transfer of tokens that represent a claim), the transfer of a token would be invalid, and thus the claim would not have been validly transferred to the purchaser. Therefore, the question to consider is whether tokens can be transferred in a form other than a written assignment. Possible solutions would be to (i) transfer tokens like securities, which requires that securities (*de lege lata*) can be issued in the form of a token, or (ii) qualify tokens as uncertificated securities and trigger a respective change in law (*de lege ferenda*).

The two alternatives are examined in the attached position paper. It proves necessary to discuss two topics in detail, namely first the qualification of tokens (as securities or uncertificated securities) and subsequently the transfer of tokens (in the form of securities or uncertif-



icated securities or in another form). The recommendations resulting from the said examination are listed further below in the text and they are also acknowledged in detail in the position paper.

2.1.2 Application of the Anti-Money Laundering Act (AMLA) on tokens

Payment tokens

In its guidelines, FINMA qualifies certain tokens as payment tokens and their issuing as an “issuing of means of payment” (Herausgabe eines Zahlungsmittels), subject to supervision (Art. 2 para. 3 lit. b AMLA).

In assessing the applicability of the AMLA, however, it should be noted that not certain means of payment as such are subject to the AMLA, but rather persons (natural and legal) who carry out a specific financial intermediary activity. This activity may include, among other things, accept or hold on deposit assets belonging to others or assist in the investment or transfer of such assets on a professional basis (Art. 2 para. 3 lit. b AMLA). Likewise, a financial intermediary activity exists, for example, when non-cash means of payment are issued or managed and the contracting party thereby makes payments to third parties (Art. 4 para. 1 lit. b AMLO). Accordingly, the AMLA lacks a clear definition of the term “means of payment”. The legislative understanding of the term is only described as an example by listing credit cards and travelers’ cheques as examples of means of payment in accordance with the AMLA. It is therefore not a payment token per se or its mere issuance that is subject to AML regulations, but, possibly a financial intermediary activity in connection therewith.

An issuer of payment tokens, who also carries out financial intermediary activities, i.e. is involved in any form in the settlement of the payment transactions with the tokens, must comply with the following due diligence obligations:

1. Verification of the identity of the customer
2. Establishing the identity of the beneficial owner
3. Repetition of the verification of the identity of the customer or the establishment of the identity of the beneficial owner
4. Special duties of due diligence («risk-based approach»)
5. Duty to keep records
6. Organizational measures

Utility tokens

The utility token provides its recipient with access to a digital use or service provided on or using a blockchain infrastructure. As a rule, there is no payment function associated with it. As a result, the issuance of a pure utility token regularly does not involve any financial intermediary activities within the meaning of the AMLA. The issuance of utility tokens with an ancillary purpose for payment is not subject to the AMLA, provided that the main function of the token fulfills a purpose outside the financial area and the other requirements according to FINMA- Circ. 11/1, margin no. 13 ff. are complied with.



Asset tokens

Asset tokens are treated as securities by FINMA in their guidelines. The issuance of tokens, which qualify as securities, is not subject to the AMLA. However, the trading of securities is subject to subordination (Art. 2 para. 3 lit. c AMLA).

Interim conclusion

Under certain conditions, the rules of the AMLA are already applicable today to the issue and transfer of tokens. Based on the present interpretation, the obligations imposed on the financial intermediaries concerned are in principle justifiable. Further explanations regarding the recommendations in this area are acknowledged in detail in the attached position paper.

2.1.3 Application of FMIA and Banking Act on Tokens

Tokens as securities

In its guidelines for enquiries regarding the regulatory framework for initial coin offerings (ICOs), dated 16 February 2018, FINMA issued the first clarification for when tokens qualify as securities. According to the communication, FINMA bases its assessment on the underlying economic purpose of an ICO and not on the classification used by the issuer. Payment and utility tokens are generally not considered as securities, whereas investment tokens are. FINMA notes that tokens can meet the criteria for more than one of these token categories. Such hybrid tokens must meet the regulatory requirements for all categories to which they belong. The distinction between investment and utility tokens is difficult in practice.

The classification of these different stages of development of tokens under the stock exchange law can hardly be made on a blanket and global basis. FINMA treats pre-financing and pre-sales basically like mature functional tokens. This means that the issued values are regarded as securities within the meaning of the FMIA, i.e. provided they are standardized and suitable for mass trading securities, bonds, derivatives or intermediated securities. Based on this, at least the following statements can be made:

- Voucher and pre-functional tokens that relate to investment and utility tokens are securities that meet the requirements of Art. 2 FMIO. This is especially the case if they are offered to the public «in the same structure and denomination or are placed with more than 20 clients».
- Pre-functional tokens, which will later be used as payment tokens, are not currently subsumed under the definition of securities according to FINMA. However, FINMA may deviate from this principle if the promoter commits to set up a functioning application for the token purchaser. If there is a secondary market for such pre-functional tokens prior to the finalization of the application, or if such a prospect is promised, they would be considered as having a securities character.
- Voucher tokens that can be exchanged for payment tokens are to be considered as securities if they fulfill the requirements of Art. 2 FMIO. If the holder of such tokens has an enforceable right to switch to a functional token, this would generally lead to the qualification of the token as security.
- If in the case of pre-financing or of the issuance of voucher or pre-functional tokens the trading and assignability of the claims on the functional token is excluded, then these instruments do not qualify as financial instruments suitable for mass trading and the quality of the securities is lacking.



However, a secure qualification of the different forms of financing cannot be carried out at the present time. A uniform classification of these facts by the legal profession could therefore clearly promote legal certainty in this area.

Legal consequences

Qualifying tokens or earlier development stages of financing blockchain projects as securities currently has little impact on the primary market. The self-issuing of these instruments does not result in a duty of subordination according to the applicable financial market laws. Exceptions exist only for the following constellations:

- According to Art. 3 Para. 3 SESTO, derivative companies are required to be regulated as securities traders if, in a professional capacity, they create derivatives and offer them to the public on the primary market for their own account or for the account of third parties. This is relevant for tokens which qualify as derivatives according to the FMIA.
- Underwriting and offering tokens of third parties publicly on the primary market, is, if conducted in a professional capacity, a licensed activity (Art. 3 para. 2 SESTO) if the tokens in question qualify as securities.
- The issue of shares and bonds leads to a compulsory prospectus obligation. Especially in the case of international issues, the prospectus requirements of the jurisdictions concerned must always be taken into account. These requirements are considerably higher in Europe or the USA than in the applicable Swiss law.

Concerning secondary trading of tokens which qualify as securities the requirements for brokers and trading platforms (Article 3 (5) SESTO, Arts 26 ff. FMIA, Art. 42 ff. FMIA) must be taken into account. Depending on the circumstances, the provisions of Art. 142 f. FMIA on insider trading and market manipulation are to be complied with.

Tokens as public deposits

In the aforementioned ICO Guideline, FINMA has generally subsumed Pre-ICOs under the securities definition, at least in the table on page 7, which does not cover all possible facets. There are different types of pre-sales. In pre-sale, either tokens are sold before the ICO or claims are granted for future tokens. According to the current FINMA practice, this may be seen as a prohibited banking activity: receiving deposits from the public and promoting it. Public advertising and acting in commercial capacity within the meaning of Art. 6 and 7 Banking Ordinance are likely to be given within the framework of planned ICOs and related projects due to the internet presence. This holds the danger that the enforcement department of FINMA intervenes and requests information. Various ICOs attract third parties for marketing and sales. For the company performing the ICO, this may constitute improper advertising, and for the third party involved, an unauthorized distribution or underwriting activity.



2.1.4 Recommendations of the ICO/Token working group

Transfer of tokens

Recommendation 1: Transfer of tokens without change of law

Based on various doctrines on the electronic shape of certificates, it can be argued that the existing law does not preclude the purely digital transfer of tokens, provided that they are shaped as electronic securities and kept in a decentralized transaction ledger. In order to achieve this result, art. 922 CC has to be interpreted broadly: in addition to a physical transfer, also a digital transfer should lead to the transfer of title on a certificate.

For practical and economic reasons, such an interpretation seems to be welcome. It should not be overlooked, however, that, at present, we lack of court practice on the central legal issues and, therefore, these interpretations of the current law, as well as all others, are subject to the disadvantage of legal uncertainty. If the respective risks are to be excluded, the only solution is a change in the law in the sense of Recommendation 2.

Recommendation 2: Transfer of tokens with change of law

A change in the law can be made on three passages of the Swiss Code of Obligations:

- Option 1: One approach could be, on the one hand, a revision of art. 165 CO, according to which the assignment of claims no longer needs to be in written form. This option brings blockchain projects the greatest freedom. It would, however, be associated with considerable political effort to enforce this option. If necessary, such concerns could be taken into account with a revision of art. 165 CO, providing for the elimination of the written form requirement only for certain digital business models. Thus, the existing wording of article 165 (1) CO could be amended to exclude digitally transferred claims from the requirement of a written form.
- Option 2: On the other hand, the described legal risks can be eliminated through an amendment in securities law. The insertion of a new art. 973d CO allows purely digital transfer of fungible rights, provided that they are kept on a digital and decentralized transaction ledger. This proposal openly addresses the essential needs of the blockchain community and represents only a relatively minor intervention into the regulatory landscape.
- Option 3: Finally, as a middle ground, it would also be possible to delete the requirement of a written form from art. 973c CO. In this option, all uncertificated securities, even those not kept in a decentralized transaction ledger, could transfer in a form-free manner. The downside to this change in the law is that not all tokens issued in practice qualify as uncertificated securities. In addition, areas other than the blockchain would also be affected, hence, the political acceptance of such a proposal cannot be easily evaluated.

The advantages and disadvantages of the options described are less of legal, but rather of political nature. Therefore, the authors of the position paper do not comment on the prioritization of the options and recommend to the task force to hand over the option in the present form to the authorities without proposing any prioritization.

At its meeting on 23 April 2018, the Blockchain Taskforce spoke in favour of prioritising variant 1 compared to variants 2 and 3.



Application of AMLA on tokens

Recommendation 3: No adjustment of anti money laundering regulations

Under certain conditions, the rules of the AMLA are already applicable today to the issue and transfer of tokens. Therefore, an amendment of the current law does not appear to be necessary.

Recommendation 4: Best practices for transaction monitoring

In order to increase confidence in Blockchain technology vis-à-vis the authorities and other participants in the financial market (especially banks), the creation of "best practice" rules for transaction monitoring after the initial issue of the tokens should be considered. Among other things, special due diligence obligations could be introduced; a risk-based approach should be followed.

Implementation of FMIA and Banking Act on tokens

Recommendation 5: Creation of a regulatory token map

The qualification of tokens as securities or deposits depends significantly on the stage in which the ICO is in (pre-financing, vouchers, pre-functional, functional tokens). As part of the planned token map, this temporal dimension should be taken into account. The map should show at what stage and under which conditions it can typically be assumed that tokens are securities within the meaning of the FMIA or deposits within the meaning of the Banking Act.

Recommendation 6: Regulatory establishment of a blockchain sandbox

The current supervisory law is aimed at the regulation of centralized and established structures. This circumstance can have a restraining effect on the innovative power of the blockchain. If blockchain projects meet certain requirements, they should, therefore, be granted sandbox relief in the sense of a regulatory carve-out. In particular, the tokens in the scope of this carve-out would in principle not be governed by the provisions of FMIA, SESTA, and Banking Act. On the other hand, under the sandbox, the prospectus requirements of the forthcoming Financial Services Act, as well as the AMLA rules, should be observed.



2.2 Token Map

The main goal of the Token Map is to allow all major stakeholders (startups, enterprises, legal and other advisors, regulators and legislators, and finally investors) to design, discuss and understand various tokens for their respective needs. The token-based economy is still in its infancy, and business models, legal and technology terms as well as legislation are still rapidly evolving. The Token Map will therefore propose a set of criteria and terms to be used in the context of designing and evaluating blockchain-based projects that issue their own tokens. This document will need to be updated on a regular basis in order to keep pace with the industry and remain relevant to the major stakeholders.

Three-Faceted Approach

There have been multiple efforts in the past to catalogue and illustrate various types of tokens and group them in different categories. An attempt to display and categorize tokens on a single infographic or a table results in either an oversimplified view or quickly becomes too complex. There are currently more than 1500 various tokens supported on a dozen various blockchains and distributed ledger technology platforms, and the number of tokens and platforms is steadily growing.

It is, however, not just the sheer number of tokens that make the categorization effort difficult, it is also the continuous innovation in so-called “crypto or token economics” (“tokenomics”) mechanisms that are being invented and tried in order to incentivize the holders of a token to pursue a certain goal, (e.g. increase the monetary value of a network, participate in running the shared infrastructure, secure transactions, facilitate engagement with a content provider or an app, share personal information, finance an open source project and many others). There is no doubt that experimentation and innovation in this field will continue and will result in even more radical ideas and unique characteristics that future tokens and the underlying platforms will support. At the same time, it is possible to capture and analyze various dimensions (or characteristics) of a token depending on the point of view and the goals of a particular stakeholder. For our effort, we have decided to focus on the three major groups of stakeholders:

- Start-ups/Developers and their Advisors

This group is focused on designing their tokens, including selecting approaches to distribution and understanding legal and tax implications of their decisions. It is important for these stakeholders to capture and express the economic and utility function of their tokens.

- Regulators/Legislators

This group is focused on understanding how a particular token should be treated in the context of an existing set of laws. It is feasible that a gap in the legislation can be identified based on the original intent of the token designers and the new possibilities or ways of operation made possible by blockchain and distributed ledger technologies.

- Investors/Advisors/Intermediaries

This group is primarily focused on understanding the risks associated with acquiring, using or holding a particular token.



To cater to these groups and, at the same time, allow for continuous innovation we propose to use a three-faceted approach to token categorization and develop three types of inter-related maps: Token Design Map, Token Regulation Map and Token Investor Scoring Map.

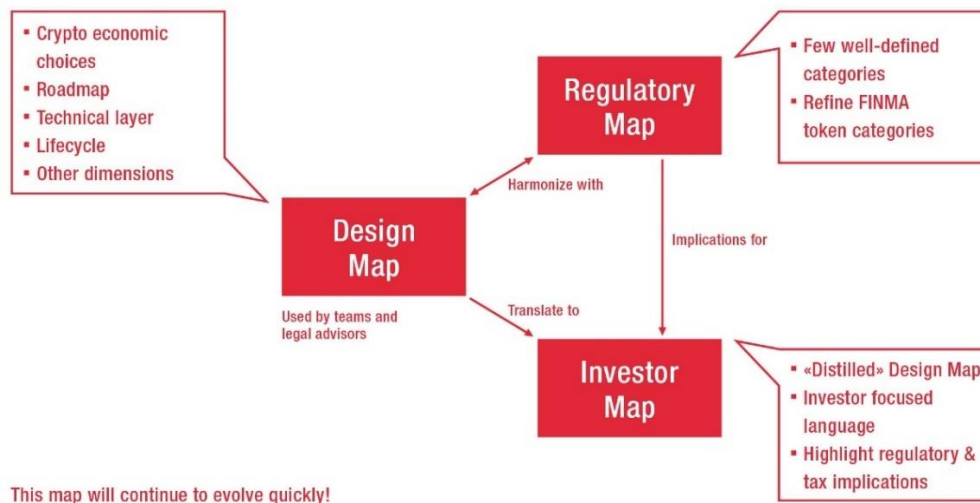


Figure 2: Token Map dreigliedriger Ansatz

2.2.1 Token Design Map

This map is targeted primarily for use by the startup teams that are in the process of designing their token or tokens and by their respective tax, legal and other types of advisors. It is important that this map allows one to clearly capture and explain the intent, value and utility of the token. To that end, we propose the following set of categories:

1. Token Foundation (how it is implemented technologically)
2. Purpose (what the end-user/holder is intended to use it for)
3. Source of Value (where economic value of the token comes from)
4. Lifetime Quantity (how many units of the token will be created during its lifetime)
5. Minting Mechanism (how the token is issued and who has control)
6. Utility (how the token is used on a platform or within an application; more than one use is possible)

2.2.2 Token Regulation Map

This map is primarily intended to clearly capture how regulators will treat a particular token, given the existing set of laws. In Switzerland, FINMA will base their evaluation on the original intent of the token and not on how the token is called or might be used by third parties (e.g. a utility token speculated on by third parties will not be automatically treated as a financial security). We believe that the classification released by FINMA provides a solid and positive



basis for issuing tokens in Switzerland. However, certain definitions could be further clarified, in order to avoid excessive processing requirements and overheads for the startups and enterprises issuing their tokens as well as for FINMA processing ruling requests.

2.2.3 Token Investor Scoring Map

This Map is intended as a due-diligence tool for investors and users of a token to understand and evaluate risks associated with holding a token.

To make the process of evaluation easier, two scoring mechanisms were developed: one for Tokens that are still under development (anything from a white-paper to a functional prototype) and another for “ready-to-use” tokens (those that can be fully used on a functioning platform).



2.3 Banking

Banks see and recognise the opportunities and new possibilities that blockchain technology can create for the Swiss financial and technological centre. Therefore, the Banking working group looks into new business models and the resulting value-added potential for the financial sector.

2.3.1 Potential of blockchain technology in the financial sector

In recent years, new start-ups have emerged in the field of blockchain and cryptocurrencies. Blockchain technology offers new potential for the financial industry in terms of earnings as well as costs.

In terms of earnings, these are new business models and new products and services, offered by existing as well as new companies. The 581,954 SMEs in Switzerland (as of 2017, source: <https://www.kmu.admin.ch>) represent enormous potential, only a very small part of which is currently listed today on Swiss stock exchanges. New platforms on the blockchain make it possible, for example, to optimize the process of raising capital as well as all other subsequent processes. Securities could thus be issued and managed by the SMEs themselves. Other products and services are relatively new forms of asset management through new digital investment products, a digitally-issued Swiss franc, etc. The earnings potential is being met by a large number of new start-ups in this sector, and not only by those founded in Switzerland, but also those relocating to Switzerland from other countries, creating jobs and generating new income. According to the Cryptovalley Directory, an online map and catalogue of the Swiss industry, there are currently over 400 such companies based in Switzerland (source: <http://cryptovalley.directory>). However, this potential can only be realized if these companies also gain access to the existing financial market infrastructure.

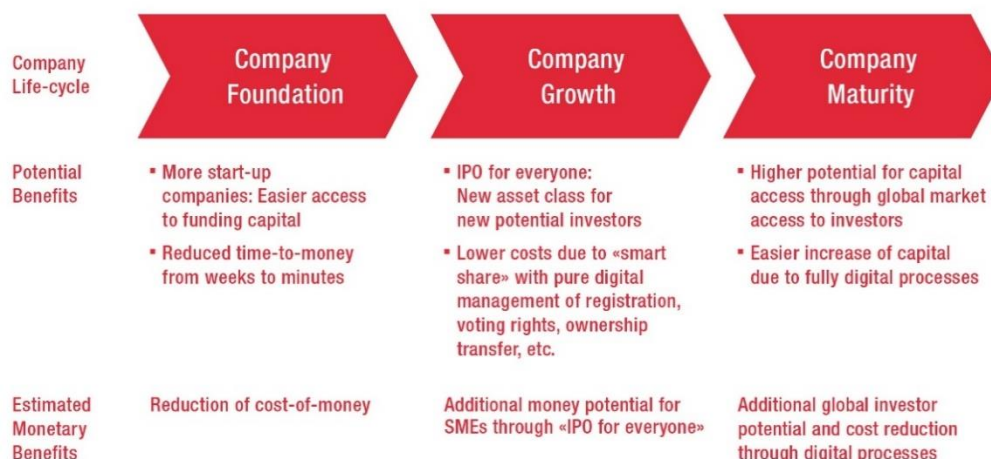


Figure 3: Example "IPO for SMEs" (Source: Swiss FinTech Innovation Lab)



In terms of costs, potential arises along the entire value-added chain from the perspective of the financial industry. Examples include simplified client identification through new, blockchain-based KYC approaches, up to mortgage contracts based on smart contracts. The potential ranges from the reduction of clearing and settlement times, lower error rates, the reduction of operational risks up to improved regulatory transparency. Many of the existing processes in the financial industry can be optimized through blockchain. In the payment sector, these include the processing of international payments, IoT payments or even P2P payments. In the investment field, these include, for example, post-trade settlement, electronic marketplaces and stock exchanges as well as liquidity management. In the financing sector, syndicated loans, trade finance and bonds can thus be optimized. It is very probable that many of today's products will be transformed through blockchain-based solutions.

In summary, the blockchain can be regarded as the missing link in the internet. During the first phase, the focus was on the presentation of information. During the second phase the emphasis was on the exchange of digital services via electronic platforms. The currently emerging third phase additionally focuses on the exchange of all kinds of (digital) values via the internet as well as the development of a P2P economy.

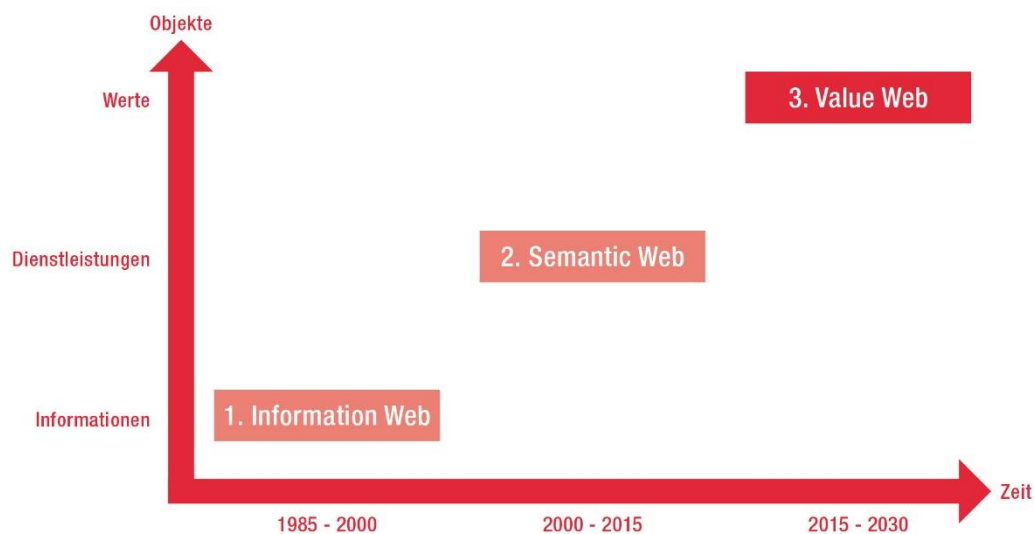


Figure 4: Evolution stages of the internet (Source: Swiss FinTech Innovation Lab)



2.3.2 Opening business accounts

Another area of interest for the working group are questions about the practicalities of opening an account. Presently, many young companies based in Switzerland are not given business accounts in Swiss banks. For this reason, they open their accounts in foreign banks, mainly in Liechtenstein. It is crucial for the blockchain hub that these companies should be able to access the financial market infrastructure in Switzerland in the foreseeable future.

2.3.3 Recommendations of the Banking working group

Recommendation: Preparation of a catalogue of requirements for blockchain companies

Banks are looking for solutions, so that young companies based here are able to open business accounts in Swiss banks. A working group led by the Swiss Bankers Association is examining the legal risks and general conditions for companies with different points of contact to Blockchain, ICO or cryptocurrencies.

The aim is to draw up a catalogue of requirements, which will also lay out – as far as financial market services are concerned – the procedure by which companies can obtain information identifying their investors and clients. These processes must be in accord with the agreement on the Swiss Banks' Code of Conduct with regard to the Exercise of Due Diligence (CDB).



2.3 Cybersecurity

In principle, blockchain technology offers a high degree of security due to its decentralized structure and low risk of counterfeiting. However, it has frequently been the target of hacker attacks, with cryptocurrency trading platforms in particular being repeatedly targeted. Since financial assets and sensitive data are usually involved in the use of blockchain, the potential for damage is relatively high. Security is thus of paramount importance for the success of blockchain technology.

As a first step, the working group will draw up an interpretative guide, which shall identify the weaknesses and potential vulnerability of blockchain technology and its use. Subsequently, the working group will focus on individual areas. A possible result is the definition of standards, for example in relation to the storage of digital keys. The group will commence its work in the second quarter. Results are expected in the fourth quarter.



2.4 Other application areas

The objective of the working group is to develop views on other industries and sectors in Switzerland that are influenced by blockchain technology, while examining how blockchain-relevant skills can be spread through further education and training. These perspectives - parallel to the other working groups - could sustain and promote the attractiveness and competitiveness of the Swiss blockchain hub. The results of this work should be available by the fourth quarter of 2018.

Starting point

Blockchain as a technology will impact the workings of all three sectors of the Swiss economy (agriculture, industry and services) and all its individual industries. This will be the case for companies of all sizes, from start-ups to SMEs to multinational companies. Further fundamental impact is also to be expected in the non-profit sector, NGOs (so-called "non-governmental organizations") and in eGovernment.

In an analysis from 2017, PwC Strategy& estimates on the basis of various input data and analyses that the value of blockchain-based applications will increase exponentially over the upcoming years, with a worldwide volume of USD 21 billion by 2020 (today: approx. USD 4-5 billion), up to > USD 1000 billion from 2027.

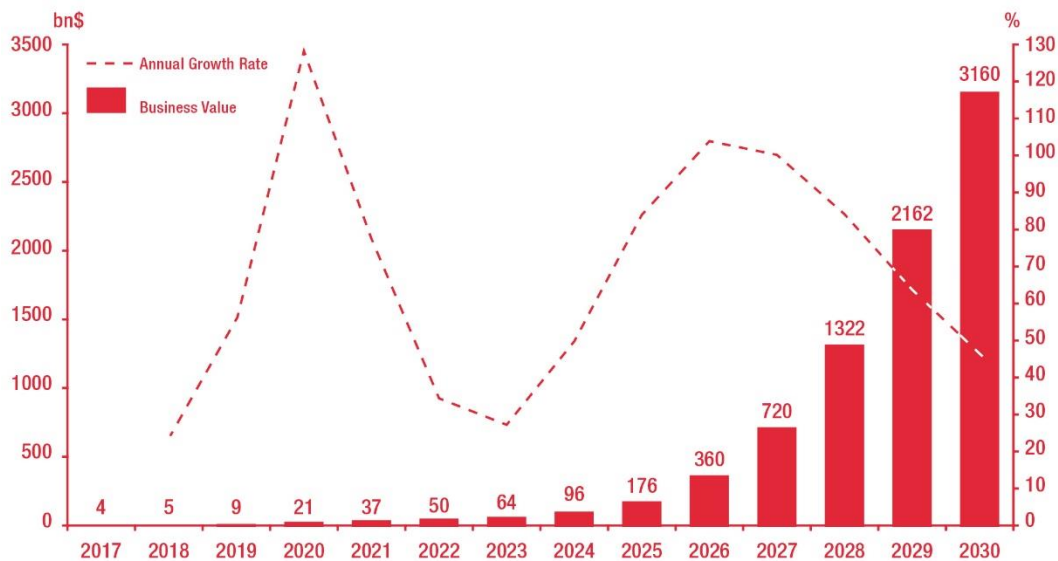


Figure 5: Global blockchain market in billion US Dollars (Source: Gartner, Forecast: Blockchain Business Value, Worldwide, 2017-2030, 2 March 2017)

Notes: Blockchain "business value" comes from: (1) increased sales, (2) new sales opportunities, (3) decreased input costs, (4) reduced what Lean Six Sigma calls "indirect costs," such as customer experience



The same analysis was used to estimate distribution to different sectors of the economy. The four industries with the greatest blockchain potential are the manufacturing and industrial sectors, communications and media services, as well as retail business and banks with respect to capital markets.

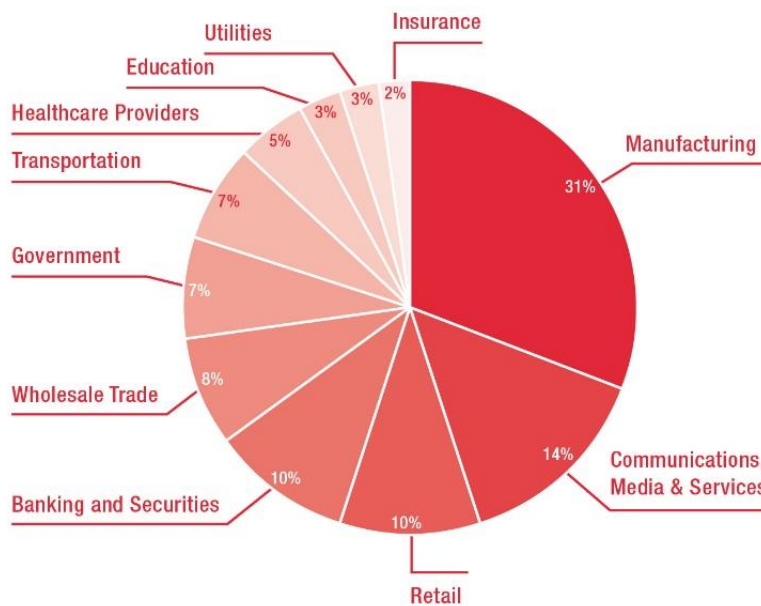


Figure 6: Global distribution of the blockchain market by industry per 2030 (Source: Gartner, Forecast: Blockchain Business Value, Worldwide, 2 March 2017)

Procedure

In view of the importance of blockchain for the economic future, the following outputs will be achieved by the working group:

1. Analysis of the potential by industry/sector in Switzerland
2. Definition of concrete measures/recommendations by industry/sector
3. Separate analysis and recommendations for training/further education in the blockchain technology sector

While working on these issues, the working group will approach exponents in the respective industries/sectors so as to gather their opinions and other input in these three areas through informal open interviews and discussions. For this reason, a good mix of SMEs and large companies is necessary, as well as diversity by region and national language. Parallel to the interviews of industry experts, a catalogue of measures will be drafted, to be refined and consolidated by the working group.

A special meeting will take place on the subject of education, conducted with representatives from the teaching and research sectors, where specific analysis and recommendations will jointly be worked out.



2.5 Political sounding board

2.5.1 Acknowledgement and political positioning

The political dimension of blockchain technology is immense, even epoch-defining. If politics, the economy, society and the public sector do everything right, we will progress from an Internet that has brought about a globally networked exchange of information and data monetisation, to an internet characterised by falling costs for negotiations, monitoring and enforcement of social agreements and economic contracts, and revolving around the values of integrity, cooperation, security, and data protection in all transactions.

An Internet that brings forth a peer-to-peer economy with both decentralized as well as integrated institutions, does not just allow, but demands collaboration. There is more than mere hope that this new internet can achieve the technical capacity to tackle our most burning social and economic challenges.

Thanks to its worldwide reputation and the confidence inspired by its stable, innovation-friendly system, Switzerland has gained a global pioneering role in blockchain technology. The creation of these required conditions have been largely politically-led. It is politics that have allowed the potential of this pioneering role to be exploited by our economy and society. Switzerland is predestined to play a pioneering role in the development of blockchain technology, in its application in business and the state, as well as in its accompanying regulation. Our country has all the characteristics and elements essential to this technology: Security and trust are very important to us; we have the world's best universities and an excellent, innovation-promoting network between research and commercial application, between science and business. Switzerland is organized on a decentralized basis and thus matches the DNA of blockchain technology. Political, financial and scientific leaders are used to working together and provide a basis for quick decision-making. They now must do this for blockchain.

The Political sounding board is convinced that there is a need for some adjustments on a regulatory level regarding blockchain technology and its particular applications. The group is unanimous that these adjustments should be made on the premise of the greatest possible regulatory freedom for the blockchain ecosystem.

2.5.2 Main points

- The full potential of blockchain technology can only unfold if citizens, as well as private and public institutions integrate with the technology, and if the technology itself is properly recognized by the legal system and by society. For this, acceptance must be increased.
- Blockchain technology still suffers from a lack of recognition from state institutions. For the full social potential of the blockchain to be exploited, the discourse must become both broader and more intensive. Political leadership has an active role to play in this.
- In addition to the established law, Switzerland is well-practiced in self-regulation and quality assurance through market participation. This experience can also be harnessed in new, rapidly changing technologies such as blockchain. State regulation should only be provided where existing regulations or self-regulation are inadequate. The focus should be on protection from improper use.



- The availability of training and further education around blockchain applications needs to be further developed, so that confidence in the security and value-adding potential of this technology can be further expanded and exploited. Ultimately, the goal is to secure and grow technological and high-value-added jobs in our country.

2.5.3 Recommendations

- The Political sounding board supports the decision of the Blockchain Taskforce, that Recommendation 1 in the ICO/Tokens working group should not be pursued further due to lack of legal certainty with respect to lack of court practice. The group also supports the decision that regarding the use and transfer of tokens, variant 1 listed under Recommendation 2 should clearly be prioritised against variants 2 and 3.
- Recommendations 4 to 6 of the ICO/Tokens working group are also supported by the Political sounding board. It recommended that these be incorporated in concrete initiatives and/or political dialogue at a federal and cantonal level.
- In order to realise the economic potential in a sustainable fashion, the blockchain industry needs to have immediate access to financial market infrastructure. Banks in Switzerland are therefore called upon to provide an adequate and timely solution, allowing young companies to open bank accounts. Accordingly, it is recommended that both the Swiss Bankers Association and the federal legislator take action.
- The financial sector should be supported during essential knowledge-building process by a yet-to-be-constituted pool of experts, in order to facilitate the handling of blockchain projects for employees – especially those within compliance departments.
- The economic and social potential of blockchain technology should be examined within the scope of a university-level project and/or through other institutions.
- The sounding board is in favour of carrying out specific events, aimed at the public sector and public service providers, focused on necessary knowledge building.
- To allow the early identification and assessment of emerging trends and developments in the field of blockchain, the sounding board recommends putting in place a monitoring mechanism to identify and assess international developments.
- Finally, the Political sounding board recommended that the Blockchain Taskforce be continued to meet the need for ongoing dialogue, the need to ensure implementation of agreed recommendations, and to accumulate and transfer knowledge on upcoming activities regarding Cybersecurity and Other application areas.



3. Future of the Blockchain Taskforce

In the first quarter of 2018, the Taskforce addressed the most urgent issues related to its objective of maintaining and enhancing the attractiveness of the blockchain site in Switzerland, thus handling mainly regulatory aspects. As is also shown by the Other application areas working group, development is still in its infancy and it can be assumed that socio-political challenges will increase, particularly due to the increasing influence of blockchain technology on different industries. For this reason, the initiators of the Blockchain Taskforce - Mathias Ruch and Lorenz Furrer – have decided to transfer the Blockchain Taskforce into a new, broadly supported organization and thus to found and build the **Swiss Blockchain Institute** (working title). Constant monitoring of international developments, supplementing the existing pool of expertise, and tying in the research activities of Swiss universities will jointly form the basis for conducting public affairs and communications as well as for identifying and implementing interdisciplinary projects of national importance.

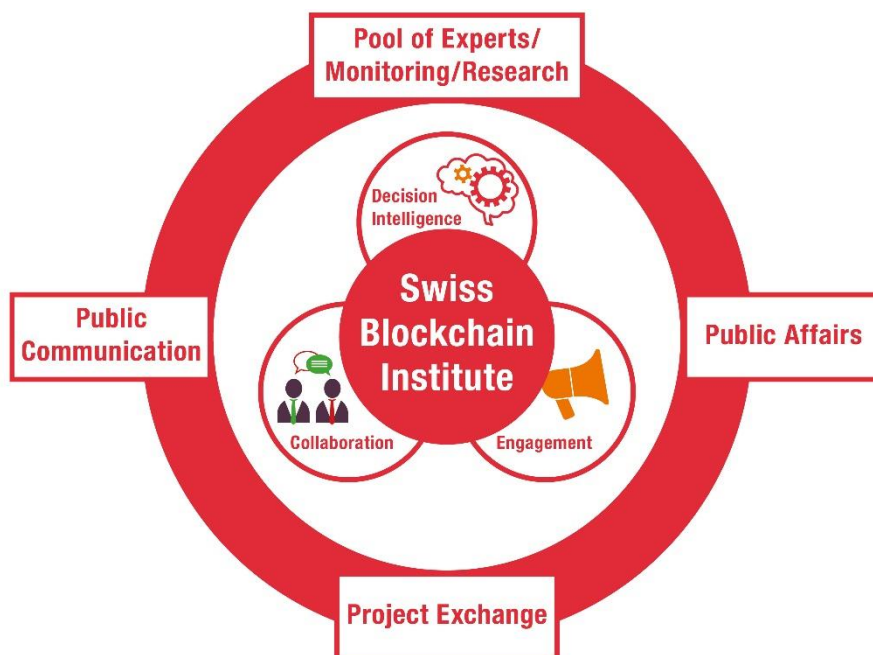


Figure 7: The Swiss Blockchain Institute as a pool of experts/monitoring/research, public affairs, project exchange and instruments of public communication

The Swiss Blockchain Institute is to be financed both by private and public sources. An initial Coin Offering (ICO) shall be used to finance future activities. The integration of supporters and members will be achieved via a Swiss Blockchain Institute token, so that certain rights (e.g. voting rights) can be mapped on the blockchain. Members and supporters will have the opportunity to purchase corresponding SBI tokens and thus benefit from the latest international information on the topic, and make their own selective or comprehensive contributions. Decision papers and projects can be submitted to members for approval following a preliminary examination by a designated group.



Annex

1. Position paper on the legal classification of ICOs
2. Token Map – Token Classification Framework