# TOP 50 REPORT 2022

**ZUG, 16TH JANUARY 2023**

The blockchain industry in Crypto Valley, Switzerland and Liechtenstein analyzed and visualized.

CV LABS

BANK FRICK

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# CRYPTO VALLEY, THE MOST MATURE GLOBAL BLOCKCHAIN HUB

# Summary

## Key data

- Crypto Valley Top 50 entities represent a combined value of $185B at 31st December 2022.
- Crypto Valley Top 50 companies equity valuation is $9.7B on 31st December 2022, up 55% from $6.3B on December 31, 2021.
- Crypto Valley Top 50 blockchain platforms market capitalization amounts to $175.6B.
- The total number of firms in Crypto Valley is 1135, an increase of 0.6% from 1128 in December 2021
- The total employment by all blockchain entities in Crypto Valley amounts to 5766, a 4% decrease on 2021, whilst employment by the Top 50 firms actually increased by 24% from 1010 to 1248.
- Crypto Valley now counts 2 Commercial Company Unicorns and 7 Blockchain Platforms Unicorns (i.e., projects valued at more than $1B).
- The funding on which the Top 50 entities of the Crypto Valley are building increased by $85.2M, up 2.7%, reaching $3.2B

## Key takeaways

2022 has been a tough year for the global blockchain ecosystem. All asset classes have undergone a downturn due to macroeconomic reasons. As a risky asset class, Crypto has been especially hit, and the subsequent collapses of faulty projects (Luna, Celsius, Arrow, FTX) worsened the situation. The above-mentioned key data numerically illustrates how consequences were felt in the Crypto Valley. However, the data also highlights that Crypto Valley is resilient, sustainable, and growing.

Concurrently, the observation of decent funding rounds in 2022, as well as the improved valuation for companies, shows that in Crypto Valley, despite the adversarial circumstances, the blockchain industry is thriving. What can be expected is a refocus of the communities on decentralization, recognizing that this is the main feature that allows for a disruptive value proposition from blockchain. In any case, the vibrant Crypto Valley community, more than ever, is working intensely on building distributed infrastructures, decentralized applications on top of them, and facilities to serve the resulting on-chain ecosystem.

As of the time of writing this report, and due to repeated scandals in 2021-2022, the regulatory framework worldwide is evolving in depth regarding assets recorded on distributed ledgers. However, in the case of Crypto Valley, the regulatory bodies benefit from an outstanding and deserved reputation for dynamism, liberalism, openness, knowledge, precision, and strictness. Adding to this, entrepreneurs can proactively reach out and discuss pieces of regulation. The exemplary regulatory landscape in Switzerland and Liechtenstein is a major strong point for Crypto Valley and for the region's global business positioning.

In terms of technical innovation, 2022 brought breakthroughs in terms of the scalability of infrastructures. Other major improvements are on their way, even if their delivery takes time. New companies in Crypto Valley are already making progress with staking, identity management, and usability.

Business innovation can be expected to blossom once infrastructures can deliver on their promises of cheap on-chain transactions. In this respect, the various applications of DeFi are a reality, and section 2.1 of this report explores this further. Distributed Autonomous Organizations (DAOs) are another aspect that possesses untapped potential once on-chain governance principles are sorted out.

The focus of blockchain-related companies is widening with a tendency for newly founded companies to explore ventures beyond pure technology and financial services. From a geographical point of view, Zug remains the heart of Crypto Valley, with almost half of the 1135 entities based there, followed by Zürich and other clusters still in Liechtenstein, Geneva, Ticino, Vaud, and Neuchatel. Companies are very well distributed over the Switzerland/ Liechtenstein territory. While platforms dominate the Top 50, those building in fintech are paramount. Crypto Banks remain prominent, and there is a concurrent emergence of trading and exchange offerings. On the other hand, Crypto Valley welcomes those creating infrastructure such as identity management and those who are executing better efficiencies in industries such as sports, art, and media.

## About

The CV VC Top 50 Report is created by CV VC AG. The periodic report, now in its 8th edition, focuses on market fundamentals and valuation developments in Crypto Valley, which includes Switzerland and Liechtenstein.

The report highlights the diverse blockchain and cryptocurrency ecosystem, which consists of startups, corporations, and government entities.

## Methodology

*In this year's Top 50 report, the choice has been made to separate entities into consistent groups: blockchain platforms on the one hand and commercial companies on the other hand.*

*Blockchain platforms are distributed ledgers relying on a consensus mechanism involving a native token. Their presence in the Crypto Valley is because their organizations are registered in Switzerland/ Liechtenstein. For this category, the market capitalization of platform tokens as of 31st Dec 2022 is put forward.*

*Commercial companies are founded in a classical fashion with a regular capital structure and not (or not yet) funded by tokens. As such, it is possible to calculate or estimate their equity valuation (either by way of last financing round, information from the company, and/or current estimate).*

*The separation of the two categories is important because of the very nature of the two types of entities, and, importantly, their different valuation logic.*

# Editorial by Mathias Ruch

**Mathias Ruch,**
Founder & CEO,
CV VC

Around the world, distrust and polarization are tearing at the seams of socioeconomic well-being. So much for 2022 being an uplifting year of putting the pandemic behind us. From geopolitics to cryptocurrency, the headlines have provided few reasons to trust our leaders or at times, our colleagues and fellow world citizens.

Recent events in the crypto world have damaged one of the core foundations of blockchain technology's promise - trust. It is now incumbent upon leaders to reinstate trust and lead with determination so that the cycle of distrust is broken. With trust, there is certainty and an environment where a fractured world can rebuild.

With the increased focus on blockchain technology and its potential utility, it's encouraging to see global leaders who are deeply committed to its growth and development in Crypto Valley. The Top 50 Report is a source of optimism, highlighting these influential figures who have been key in pushing forward the many uses of blockchain. These trailblazers are driving innovation in finding real-world applications for blockchain tech, creating more opportunities for collaboration between businesses and organizations. Their efforts will be paramount in producing tangible results that benefit everyone involved.

Here in Crypto Valley, we should be very proud of Switzerland's role in the evolution of the global regulatory framework environment. We are in a prime position with an exemplary regulatory landscape that provides assurance and clarity for pioneers building new global systems and trust processes. This sound legal framework has resulted in our position as the most mature blockchain hub in the world. Switzerland provides trusted, regulated infrastructure for the crypto, broader blockchain, and Web 3 industries. The Swiss values of precision, trust, democracy, and determination are evident. Switzerland has decentralization in its DNA and is a unique example of consensus-based governance. Government, politics, industries, law firms, and academia - come together in an environment that encourages collaboration and mutual trust. This close-knit network makes Switzerland a leading case study for decentralized systems worldwide. Those building here know where they stand and can operate with certainty. Despite global macroeconomic challenges in 2022, Crypto Valley is stable in size, with over 1135 companies building here. These are not alone startups but established entities. Some are unicorns, and many are "soonicorns." What is important to note is that they are Swiss based with a global perspective.

The CV VC Top 50 Report 2022 shows that Crypto Valley is strong with a determined decentralized mindset. Crypto Valley is not just a 'place' but a mindset. A mindset driven by a determination to transform how the world interacts and transacts by focusing on trust and utility over speculation.

**Mathias Ruch,**
***Founder & CEO of CV VC***

# A Brief History of Crypto Valley

The history of Crypto Valley has many known and unknown heroes. No single event or person can create such a thriving ecosystem, amend regulatory frameworks, or promote a location to thousands of entrepreneurs worldwide. Instead, many actions by individuals, government agencies, and companies helped create a unique set of historical circumstances over time.

In 2013, Bitcoin Suisse began focusing on Bitcoin trading and moved its operations to Zug. Zug has long been reputed for its business-friendly atmosphere. Still, today, it remains home to many companies in commodities trading, pharmaceuticals, and finance, but the arrival of bitcoin signified the birth of "Crypto Valley."

A network of individuals from the Bitcoin and cryptography space soon joined this list. XAPO, the leading Bitcoin storage provider of the day, was the first to take advantage of Switzerland's strong intellectual property rights protection and its rich heritage of financial security. Attracted by early Bitcoiners and the openness of regulatory authorities to enable technological innovation, a group of tech enthusiasts rented a house outside of Zug to work on the next generation of blockchain. Ethereum launched in 2015, creating yet another global technological disruption at the heart of Crypto Valley.

On May 3rd, 2016, the city of Zug announced that it would accept Bitcoin as a means of payment. The world took notice, and Zug subsequently became a prime location for doing business in crypto and locating blockchain-based companies. One of the key innovations of Ethereum is the ability to issue tokens with a specific function. The first use case for this technology was high-performance crowdfunding using programmable money. 2016 is also the year when the company publishing this report started its activities – CV VC with its ecosystem builder CV Labs.

The resulting "ICO boom" of 2017 and 2018 attracted many legitimate and, unfortunately, some not-so-legitimate projects. In early 2018, The Swiss Financial Market Supervisory Authority (FINMA) stepped in, providing guidance and classifications for tokens, clarifying what was and was not allowed under current law. This regulatory clarity spawned an entire industry of legal advisors, KYC/AML providers, brokers, financial intermediaries, custodians, and advisors.

In the financial services area, this development culminated in the approval of two crypto banks in Switzerland in 2019: Sygnum and SEBA, cementing further the Crypto Valley ecosystem.

Far from being content, a dedicated network of individuals, early-mover private firms, politicians, and vital public institutions set out to put in place the most advanced regulatory framework in the world. With solid support across the political spectrum and from the federal ministries of finance and economy, a new set of blockchain legislation was drafted, which selectively amended fundamental laws and allowed the licensing of revolutionary new market infrastructures based on blockchain. These efforts resulted in the "DLT Legislation Act." The result is the world's leading regulatory framework and stellar legal basis for issuing, trading, and owning digital assets, including securities.

In particular, the establishment of a DLT trading license, which allows for issuance, trading, and post-trading under one license, has garnered the attention of many market participants. Notably, in the Swiss regulatory landscape, the Act includes the possibility for blockchain Exchanges to sign up retail clients. Thus, Switzerland's infrastructure for regulated secondary markets for digital assets and securities is now in place, with numerous mature players and tested rails. The stage is set for the world's leading regulated secondary markets for digital assets, including securities, to become a functioning reality in Switzerland.

Lately, with early innovator firms being acquired by the most prominent traditional players in the financial industry and with maturation, Crypto Valley is confirming its leading position.

# Global Big Picture on Blockchain in 2022, Seen from Crypto Valley

Whilst crypto has marked the first inning of blockchain technology, we present our perspective on its present and future as experienced by stakeholders here at Crypto Valley. Every year is unique in the blockchain world, with its own set of cornerstones and unique circumstances. 2022 is no exception to the norm, and that is what makes it exciting to be a part of this sphere.

To begin, it makes sense to take a few steps aside and look at the broader picture. 14 years after the publication of Satoshi Nakamoto's white paper, Bitcoin is still young, cryptocurrencies are a nascent asset class, and many upgrades in blockchain infrastructures remain to be done – but the march of history is continuing, with no turning back.

Formulating a big picture is a challenging ambition, but a few characterizations that stand out are noted.

## Where things stand

- Global crypto adoption is progressing, particularly in emerging markets, such as The Middle East and North Africa (MENA) was the fastest growing crypto market in 2022, according to Chainalysis. Users in the region transacted $566 billion in cryptocurrency between July 2021 and June 2022, up 48% from a year earlier, the report found. In comparison, crypto transactions rose 40% in Latin America, 36% in North America, and 35% in Central and Southern Asia. Other regions saw growth of 22% or less.
- At the same time, crypto adoption means different things for different populations. For instance, young, tech-savvy, financial-risk enthusiasts are involved in the more developed economies. In contrast, low-cost remittances and limited banking services to populations are the engines for change in less developed countries. In these regions, DeFi protocols are a working reality.
- The recording of assets on blockchain is disrupting a lot of people, processes, and organizations. Decentralized accounting of tokens is revolutionizing the economic landscape, providing an unprecedented alternative to standard legal tender money. While crypto is not yet big enough, the potential for big battles looms. Many autocracies, such as China, have implicitly or explicitly banned crypto, while in democracies, non-frontal ways will have to be taken if states are to reach an effective target of reinforcing fiat currencies. KYC requirements on exchanges are the most obvious.
- Crypto markets have been quite disappointing in 2022. With the price of 1 BTC falling below its value of 2017, some technical indicators are indeed broken; some fundamentals are also failing. For instance Bitcoin corporate reserves of Tesla have not been imitated by other companies and are now divested. The crypto market both remains excessively concentrated into whale accounts, but also evolves as it becomes professionalized in the hand of institutional traders. Correspondingly, as the crypto adoption curve expands with retailer users from new regions such as the MIddle East and North Africa and with the uptake of new digital assets by a new generation of adopters who seek the new interface of Web3 experiences, balance will rebound.
- The latest blockchain craze has been NFTs. The public has vastly misunderstood what an NFT is: merely an entry in a distributed database. Everything remains a question of which "real world" rights are attached to this entry for whoever is declared owner in the distributed database, and how they are enforced in the real world. The popping of the digital art NFT bubble was in that sense predictable. But this episode no doubt resulted in some good questions that will lead to interesting business cases soon enough, particularly NFTs as a gateway and exchange tool within the metaverse spheres which are evolving in Web3.
- As the technology matures and transaction costs decrease, its application to data and information processing will become more practical and will spread wider. Financial services are likely to be the sector where this will have an impact first. The management of on-chain identity and linkage to off-chain data will have to also progress in parallel. Technological progresses are on their way, but building the infrastructure takes more time than expected. However, progress on Ethereum (with the Merge) and many other platforms show that things are maturing. Scalability remains key to deliver viable platforms, in particular for DeFi. Sound decentralized governance principles are crucial for the development of DAOs. Environmental impact of Proof of Work is increasingly questioned, despite emerging evidence which indicates that it is not as damaging as it seems.
- Faulty projects and frauds in 2022 have especially dented the reputation of crypto and in turn blockchain at large, and will

be a deep justification of regulators stepping in, especially for investors' protection. The latest effects of the Wormhole, Terra/Luna and FTX episodes add to the list of MtGox, Coincheck etc, but the extent of the disasters are hard to grasp and understandably cast doubt on the capability of blockchain to mature until there are efficient regulatory provisions.
As the largest economy in the world, the United States of America in particular is actively looking at regulating the crypto space. Indications are that the U.S. Securities and Exchange Commission (SEC) may be gearing up to force exchanges into compliance with existing rules.

## Refocusing on the fundamental - Decentralization

At a time when crypto, the first innings of blockchain technology is challenged in depth, it is also the time to come back to fundamentals. The key fundamental is that decentralization at a decent level remains the central feature of blockchains, to leverage in order to build applications. This fundamental will sound obvious to many, if not everyone – but unfortunately, most of the problems faced by the industry right now originate from a diversion from it or difficulties in working it out.

Distributed Ledger Technologies (DLT) might of course compete with centralized solutions for any case of data processing and storage. But distribution is the major condition for any blockchain application to truly bring added value with respect to legacy systems. Decentralization is necessary in the proposal for an alternative to fiat as was the initial vision with crypto itself. The optimal and most impactful usage of blockchain technology is between those who want to decentralize data for greater efficiencies and transparency. Making the link between on-chain data records and real world rights/assets is the key to success for any digital asset. When it comes to scandals, crypto and blockchain technologies are hardly to blame; instead, the responsibility lies primarily with central players. Speculators should also always make the effort to understand what they get into, as decentralization indeed empowers them: it charges peers with responsibilities that they did not have to manage before.

While decentralization is a worthwhile goal, it is rather an unattainable ideal. However, we must continually strive to make progress and come closer to achieving true decentralization. The promises of effective-enough distribution are well known, which all originate in trustless interactions between partakers.

With further exploration and understanding of decentralization, blockchain is entering a new era with increased efficiency in infrastructure, greater regulatory clarity and improved governance. The successful integration of user-friendly interfaces will make it ready for widespread adoption - unlocking the potential to revolutionize many industries.

The fundamental of decentralization is a significant driver of innovation here in Crypto Valley.

# Crypto Markets

## Global macroeconomic context

In 2022, crypto markets have undergone difficult market conditions. This downturn is hardly the first of its kind. But each phase of the life of cryptocurrencies has been specific in its circumstances and characteristics. In brief:

- 2013-2014, bitcoin only appeared on the radar of a happy few, volumes of exchanges were small, and information was nowhere to be found.
- 2017-2018, the ICO euphoria caused prices to skyrocket before a consolidation took place; money was cheap for risky businesses while the public and regulators discovered what crypto assets were.
- 2020-2021, DeFi protocols and NFT collectibles fueled a phenomenon of their own; incredible post-Covid fiscal stimulation came to fuel another pump on asset prices – not limited to crypto – until the central banks had to slow things down.

Meanwhile, crypto market capitalization is much more sizable than it used to be a few years ago, and crypto investment has become increasingly institutionalized. As a result, the correlation of crypto with other asset classes, especially tech stocks – has de facto increased. Investors are increasingly recognizing the value of diversifying their portfolios to include bitcoin and other digital currencies. However, current market conditions indicate that correlations between cryptocurrencies and traditional assets have increased, limiting the potential for portfolio risk mitigation through this method.

More than ever before, it now matters to view the global macroeconomic context if one wants to try to forecast crypto markets. This is an ambitious task, but here are some relevant elements to consider:

- Inflation is here. Much debate is ongoing among specialized experts to figure it out in the various regions of the world. Questions are: how much of it is due to excessively loose monetary and fiscal policies, energy prices, and supply chain disruptions? Taming inflation is an art rather than a science, so no one really knows what may be the kinetics of its resorption depending on whether wages will start increasing or whether there will be severe recessions, particularly in Europe. Uncertainty abounds.
- In any case, if central banks are serious about facing inflation, a leading scenario is that interest rates will climb more or remain high for a while. This equates to a monetary supply shrinkage, hence more difficult financing. Investors are already more cautious, a behavior that impacts younger asset classes like early ventures and cryptocurrencies.
- The debt effect at this stage may be tricky and problematic. States throughout the world and especially in developed countries, are highly indebted. For them, inflation and high rates may have a double impact. The first one is that old debt will be easier to repay. But the other is that if monetary tightening bites the economy, tax revenues will be impaired – at the very moment when there will be more need to pay for people's social security. At this point, States might favor printing money rather than find themselves bankrupt, thereby piling on inflation.

So, without even mentioning dramatic geopolitical events in some areas of the globe and a delicate end to the Covid pandemic to go through, the current macroeconomic situation is extraordinarily striking.

## Crypto markets in 2022

In a nutshell, inflation is expected to be a complex problem that central banks have the mandate to fight.

The interesting thing about crypto is that opposite forces are at play. One fact is that tight monetary policies cause investors to disregard risky asset classes, among which crypto has already suffered a lot. Another is that under inflation pressure, fiat currencies are losing real value and may lose much more in scenarios of sovereign debt crises: if investors try to escape from cash, this may push up the valuations of alternative assets. Gold is a typical one, but cryptocurrencies are now a recognized alternative.

This is why in the context mentioned above, Bitcoin and others have a card of their own to play, which will be interesting to monitor. In the next months and years - if more people come to consider that the existing financial system is fragile, a potentially stronger opportunity for cryptocurrencies will exist.

Another consideration is to wonder how much of the current downturn for Bitcoin & others is due to a crypto-winter linked to blockchain technology/crypto assets' own cycles and how much is simply the effect of wider macroeconomic conditions.

While there are definitely macroeconomic difficulties, as shown above, crypto spheres have challenges of their own. These challenges should not be overlooked.

- Frauds and poorly designed crypto platforms have taken a very heavy toll on the overall reputation of crypto/blockchain. Even if it can be argued that the cases serve as proof that centralized and faulty projects are doomed to fail, the damage they did to the industry is immense.

- Technical challenges remain, even if significant progress comes into place – but it is still slow compared to expectations, and so much remains to be done from an infrastructure as well as user interface perspective.
- Many building blocks of successful decentralized protocols still need work, such as on-chain identity management and user friendliness of applications is still lagging.
- Meanwhile, on the regulatory side, major developments are to be expected. The repeated failures and scandals of crypto projects in 2022 have cost investors billions, which is now causing extreme caution from the side of regulators with respect to crypto (see section 1.8, which details a regulatory oversight). But, from a market point of view, the impact, for now, is that investors are waiting for the dust to settle and for firmer legal frameworks to be endorsed, especially in the USA, before rules can be applied and businesses carry on with a sense of assuredness.

According to the 4-year cycle framework that takes place at the pace of the bitcoin reward halving, 2022 was due to be in a depression. The next cycle would then be in the making, with the next halving expected in the first half of 2024 - even if its effect is expected to become less important cycle after cycle.

As a result, it should be acknowledged that crypto-related issues also explain part of the downturn.

It is the conjunction of both macroeconomic circumstances and of the problems faced by the industry that together explain the market. Each has accountability.

## What to expect moving forward

Here, we highlight some developments that can be expected, desired, and required of crypto and blockchain technology moving forward. They were formulated from interviews conducted in December 20022 with experts in Crypto Valley, who are involved in all aspects of blockchain-related activities.

- The current crypto-winter shall clean up the scene from bad projects, as bear markets used to do in many industries. In a crypto bear market, developers and entrepreneurs will have the time to build far away from media coverage. Crypto winters are made for builders even while critics are on stage. Start-ups that are appropriately funded and stable enough can now focus on their product.
- More usable products are needed, especially for DeFi protocols. It should be made easier for people to participate so that the general public can be integrated.
- Financial institutions will continue to offer new crypto-related services (especially linked to custody), indicating a continued penetration of blockchain-recorded assets in traditional finance; more can be expected to come, even if this does not yet mean a full embrace of decentralization from their part.
- Gaming can be expected to break through, where in-game crypto earnings and NFT markets can fully develop as a complete ecosystem.
- Global brands are betting on Web3 from various industries, with apparel, drinks, and the luxury sector being represented the most. For them, the utility lies in deepened customer interaction, brand extension into digital realms, and new revenue streams.
- Sustainability is a topic that is here to stay. The carbon footprint of crypto activities shall continue to be monitored, as too, will blockchain's ability to offer full transparency to the carbon offset/credit markets.

There is definitely a lot of work ahead in the blockchain industry and a lot of room to build successful endeavors that draw on years of experience and accomplished expertise. The Crypto Valley pioneers are unanimous in one thing: their great determination and optimism for the times ahead.

# MEASURING FAIR VALUE FOR CRYPTO ASSETS IN MARKETS THAT NEVER CLOSE

*It's always midnight somewhere*

## Upcoming changes in requirements make this more relevant than ever

FASB's recent vote to require fair value for a larger subset of crypto assets has sparked more interest in the accounting process. It's crucial to begin discussing and planning to estimate fair value for the assets within the decision's scope. One key practicality unique to crypto assets is that reporting entities can choose the time of day when pricing their end-of-day holdings. Due to the global nature of crypto markets, the most informative fair value for accounting purposes is where the most reliable volume and exit price measures are, regardless of the time zone–i.e., it's always midnight somewhere.

## Key differences between equities and crypto markets

| CHARACTERISTIC | CRYPTO | EQUITIES |
|---|---|---|
| Markets are open 24/7 globally | ✓ | ✕ |
| Markets are consistently regulated, supervised, & are not fragmented | ✕ | ✓ |
| Information from most markets & exchanges is reliable & sufficient | ✕ | ✓ |
| Principal markets to be used across all assets for fair value can be easily identified and without expert tools | ✕ | ✓ |

## Principles for estimating fair value

Fair value guidance for accounting is derived from specific standards focusing solely on the accounting concept of fair value–ASC 820 and IFRS 13 (for US GAAP and IFRS, respectively). The standards were developed when the FASB and IASB developed joint requirements, resulting in similar approaches. They lay out principles for fair value and are consistent in the idea of fair value being informative but do not give precise calculation methods.

Below are key features in the US GAAP and IFRS standards for establishing fair value for actively-traded assets (and liabilities):

1. Apply a market-based, orderly transaction approach;
2. Identify Principal Market as the market with the "greatest volume and level of activity";
3. Rely on quoted and observable prices; and
4. Use the exit price of a market participant in the Principal Market.

A reporting entity must choose a time of day to apply these principles and find fair value. In traditional markets, it is fairly straightforward because end-of-day pricing is typically when markets close. Because an exit price is required for accounting purposes, it implies that fair value is based on the final trade price just prior to close. How should such final trades be identified for never closing markets?

## Choosing a time of day for fair value

The 24/7 global aspect of crypto trading is an amazing development. However, it creates practical challenges, such as what time of day reporting entities should measure the value of crypto.

Each entity can choose its own time of day as no specific time is required. Lukka does not provide accounting or tax advice, but one crucial principle in Fair Value is having well-documented policies at the chosen time and applying the policy consistently.

Entities may also wish to document why a time is chosen. The reason can be as simple as wanting to keep the pricing mechanics of equity investments and their crypto investments aligned. Alternatively, an entity may wish to examine price formation data further.

Volume and trade frequency may be stable across a 24-hour period, or they may change substantially after markets close. Assessing price formation is more than examining price variation because the definition of a Principal Market for fair value purposes relies on reliable and sufficient trade volume and frequency information. Analysis requires access to robust data that can be used to examine volume and frequency across millions of trades, times of day, time zones, many exchanges, and even years.

## Unlocking real-time insights and automated execution

Lukka provides advanced tools and data to analyze and select an informed time of day for crypto assets. This enables our customers to execute at that chosen time automatically.

The Lukka Prime methodology provides FMV of actively-traded crypto assets compatible with GAAP, IFRS, and IRS rules. It is used by audit firms, some of the biggest banks, exchanges, fund administrators, funds, trading firms, etc. The methodology is proven to solve use cases beyond just accounting. The fair value methodology is a foundation of high-quality data and a classification system that permits users to further understand the types of crypto assets they are considering or are already holding. Users can assess whether a particular crypto asset is likely within scope for new fair value requirements. For any crypto assets not within scope, Lukka's impairment product facilitates daily, monthly, quarterly, or annual impairment testing and calculation at the push of a button.

**Suzanne Morsfield**
Global Head of Accounting Solutions, Lukka

# SPECULATION VERSUS REAL VALUE - THE BUSINESS CASE FOR BLOCKCHAIN AND CRYPTOCURRENCIES

Unfortunately, today, cryptocurrencies are more often used as financial instruments rather than utilities. Several factors contribute to this trend:

**Limited use cases:** While there are some use cases for cryptocurrencies, such as making international payments or buying goods and services online, their adoption is still relatively limited. This means there are few opportunities for people to use cryptocurrencies for their intended purpose, making them more attractive as speculative assets rather than as utility.

**Inconsistent regulation:** While cryptocurrencies are regulated by some governments and financial institutions worldwide, enforcement is typically scarce and full of loopholes and inconsistencies. This makes them more attractive to speculators looking for assets that are not subject to traditional forms of oversight.

**FOMO (Fear Of Missing Out):** The incredible hype surrounding cryptocurrencies resulted in the phenomenon known as FOMO taking hold, where people feel pressure to buy into the market to avoid missing out on potential gains.

Institutional investors also share some of the blame for this.

During Bull markets, we witnessed firsthand how deep analysis of the long-term viability of these companies was clearly secondary to the amounts of short-term cash that could be made.

Most investors in these projects primarily focused on which influencers would talk about the projects, what exchanges the projects would be listed on, how steep the vesting cliffs were, social media numbers, and how soon they could cash out. Simply put, a lot of investor funding went to the wrong companies.

Members of the public also played their part in this FOMO phase.

While many tokens were defined and sold as utilities, the average buyer was simply trying to make a quick profit. In our experience, over 90% of investors sold or dumped their tokens prematurely, choosing to take short-term profits over long-term growth.

Even top tokens like UniSwap were only used by less than 2% of their total token supply for its governance features. An analysis of the wallets that received their tokens showed that their users quickly sold more than 93% of the airdropped tokens.

Another sign that users were not genuinely invested in the project is that user retention and activity rates were low. Less than 25% of the wallets that got an airdrop by UniSwap were active during the last 12 months.

In summary, unless the project outlined a clear token utility and strategy, people would just speculate with the tokens making the project team a lot of money.

When you have an environment where utility tokens are used for margin trading, it basically created a casino environment that made disasters like FTX, 3AC, and Celsius possible this year.

Stronger regulatory intervention in this industry is inevitable and will come very soon.

The situation today is analogous to the '90s during the dot-com boom. That tech revolution was initially full of wild, unstructured innovation. Those companies were quickly replaced by more mature businesses that essentially created a framework for the Web 2 infrastructure we have today.

To keep with that analogy, we saw the Megauploads and Napsters of Web3 get shut down this year; now it's time to build the Crypto versions of Netflix and Spotify.

This is an exciting time for this industry. Speculation is gradually being replaced by real business value. We anticipate that blockchain-related products and services will eventually become ubiquitous, even if customers have no idea about the underlying technology that they are using.

These companies, like TrustSwap, are starting to build products and services designed with public trust, regulation, compliance, and security in mind.

Over 30,000 crypto projects have used our tools and services. Our Team Finance product has locked several billions of dollars in Total Value, and our Crypto App has more than 4.5 Million downloads.

In addition, our TrustSwap Launchpad has safely and securely KYC'ed and launched over 45 companies raising over $50 million in public rounds to help these founders add value to the Blockchain ecosystem. We have also built Blockchain related products for one of the largest leading consulting firms, gaming firms, and recently the Banking Association of Liechtenstein.

In 2023 and 2024, to reflect the regulatory changes we see coming, we are making strategic changes and adding compliance and regulation-friendly features to our products.

Based on all the above, we believe that all crypto companies will have to rethink their business models. We remain excited about the future of this industry and look forward to being part of the next wave of innovation and business value.

**Onuora Amobi**
CMO, TrustSwap

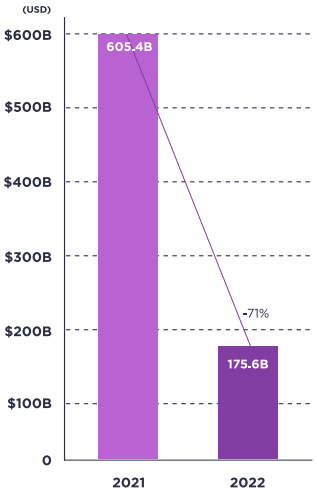
# Overview of Valuation and Funding in Crypto Valley

## Valuation

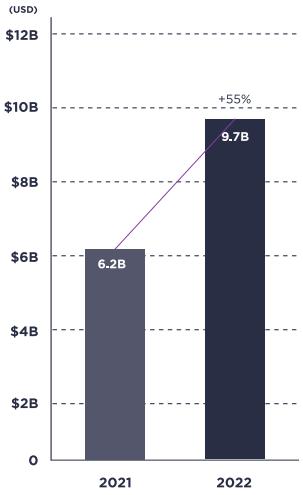
In 2022, crypto markets crashed. It does not help that the peak of valuation was witnessed shortly before year-end: the effect on the comparison is exacerbated. Hence, the valuation of the Top 50 entities featured in this report reaches $185B, down by 70% from $611.7B one year ago.

This aggregated figure splits into a $175.6B market capitalization for blockchain platforms (down by 71% from $605B), and $9.7B for the equity valuation of commercial companies (up 55% from $6.3B in 2022).

**MARKET CAPITALIZATION**
(Blockchain Platforms)

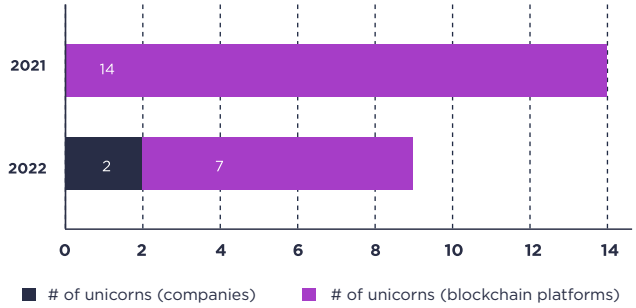



**EQUITY VALUATION**
(Commercial Companies)




Despite this situation, Crypto Valley is still home to 9 unicorns. 2 are commercial companies, 21.co - the world's largest ETP issuer & Safe - manager of digital assets on Ethereum. 7 blockchain platforms have valuations of more than one billion $USD. They are Dfinity, Near, Cosmos, Solana, Web3 Foundation, Cardano, and Ethereum.

**UNICORNS IN THE CRYPTO VALLEY**




Although 14 blockchain platforms were valued at unicorn status last year, this is the first year that any commercial companies join the list. This is a telling fact: while pure cryptocurrencies have had a volatile period, companies that are building their operations in a more classical fashion have actually gained strong valuations.

Crypto Valley's finance specialists estimate that what was seen in 2022 has the advantage that it brings valuations back down to more realistic levels. For both VCs and companies seeking funding, this presents an invaluable opportunity. Despite the challenges that come with fundraising in these trying times, it could prove to be a mutually beneficial situation for all involved if approached thoughtfully.

## Funding

The funding on which the Top 50 entities of the Crypto Valley are building increased by $85.2M (up 2,7%), reaching $3.2B.

While this is positive, it should also be noted that there are new entries to the Top 50, as well as exits, so the amount of capital raised in Crypto Valley is larger than that of the Top 50 entities alone. Funding highlights include:

- SEBA Bank raised $110M, fueling its expansion, for instance, with the opening of an office in Hong Kong and providing NFT custody.
- Sygnum Bank raised $62M, to further expand in Luxembourg and build up on its offer of indices and art tokenization.
- 21.co raised $25M, bringing the company's valuation to $2B; 21.co has over $3B of assets under management and is expanding its list of 48 products.
- Safe raised $100M, spinning off from Gnosis in February 2022, with the goal of fostering a vibrant ecosystem of applications growing on top of its smart contract accounts.

These impressive fundraisings showcase the health of the Crypto Valley's leading companies. Venture capitalist professionals rooted in the Crypto Valley reckon the situation in 2022 is more difficult than in previous years. Nevertheless, they report that there is still a decent ability to raise funds. They directly observe that good projects continue to be able to raise money, meaning that high-quality innovation in crypto and blockchains still manages to secure financing.

The advice that startups might want to take regarding funding is that they should, more than before, be early in preparing their funding rounds; they should secure cash with a longer horizon than they used to; and, of course, focus on saving financial resources for core activities.

# BUILDING A BETTER FUTURE FOR ALL OF US

The history of human society is one of cooperation through institutions. The institutionalization of human cooperation has taken many forms – from tribes to guilds to enterprises and nation-states. The latter are today's dominant institutions, coordinating most human activity on the planet. As such, they have enabled what is considered the most advanced economy and society to date.

The natural course for these institutions has been to continuously centralize. Economies of scale, cost considerations, and the constant pursuit of efficiency have consolidated power and authority in the hands of effective yet centralized entities. And while the Internet has torn down some of the societal power structures, internet users have gradually turned to a relatively small set of aggregating platforms, thereby reinforcing the overall centralization tendencies. This has led to essential aspects of society becoming more centralized, which is counterintuitive considering the Internet's main premise was decentralization.

Today's most important domains – speech, governance, and finances – are increasingly centralized. In all these aspects, personal data or belongings are held with a centralized party, creating rather adverse incentives. Thus users of these centralized institutions can fall prey to manipulation, corruption, exploitation, or censorship, thereby leaving individuals vulnerable to different forms of abuse or malfunction: their data can be exploited, their privacy violated, their freedom of expression depressed, their votes manipulated, or their funds locked.

Foundational technology is the most effective tool for impacting society at large and solving the challenges it faces. One such foundational institutional technology is blockchain, which entered the picture through the discovery of Bitcoin in 2009 and has since proliferated and emerged in many different forms.

First and foremost, so-called public blockchains have risen to fame. Constructed as a peer-to-peer network of globally distributed computers (nodes), public blockchains allow for permissionless value transfer in a trust-minimized yet robust setting. Supplemented by the component of smart contracts, even the most complex kinds of information can be encoded and run as self-executing programs on a blockchain.

Blockchain's social impact, however, has only just begun to unfold. As with any other technology, development and impact happen in stages. Initially, hardly anyone cares about a new technological breakthrough as its potential is widely unknown. Once knowledge about its potential trickles through society, more and more people become excited about the technology's possibilities.

The public blockchain's model for decentralizing and open-sourcing trust reduces information asymmetries between different non-trusting entities – be it among governments, enterprises, or individuals themselves, as well as between these different parties. By introducing a network for institutionalized trust that utilizes cryptography and game theory, public blockchains offer an alternative that could break today's increasing reliance on centralized entities that control access to information. Consequently, the pressing peril of surveillance, censorship, and human rights abuses could be successfully counteracted.

As a new general-purpose technology, blockchain's potential for social impact spans a wide spectrum and many different industries. It can disrupt different types of institutions and social systems across the globe. As a new framework for institutionalized trust, blockchains are giving rise to new economies and incentive systems that can fill the gaps that traditional institutions fail to deliver.

Blockchain's biggest impact so far has been regarding value. As a neutral technology, it has made value flow orders of magnitude faster and allowed value to flow more freely across international borders. While this value transfer function can be and is also misused for nefarious purposes, it can equally be used for achieving the good. Moreover, blockchains provide distinctive features – such as transparency or immutability – that can be leveraged to offset malicious intent when using such networks.

It seems safe to say that blockchain's social impact component will certainly gain importance in the coming years. And once mass adoption is reached, blockchain, with all its benefits, will be an integral part of our lives and society and will have improved them in many ways.

**Jonas Gantenbein**
Senior Relationship Manager
Blockchain Banking, Bank Frick

# Crypto Valley Entities' development in 2022

Crypto Valley platforms and companies continue building, no matter the current crypto winter. Here are a few prominent developments that happened over the elapsed year.

A number of protocol upgrades and application pilots took place in 2022. The famous "Merge" occurred on Ethereum, transitioning to Proof of Stake and slashing the carbon footprint of the blockchain. Other projects also delivered, such as Skale's upgrade to V2, a high-performance modular L1/L2 hybrid network of scalable interconnected blockchains, or Concordium's Sirius release introducing delegation and improved smart contracts. Dfinity announced the Internet Computer's mainnet integration with Bitcoin, bringing smart contract functionality to the cryptocurrency. Tezos activated the Lima upgrade allowing increased throughput. NotaBene launched SafePII, the industry's first end-to-end encryption for travel rule data transfers.

In financial services, Crypto Finance's "gas station" to cover execution fees for clients was tested with BBVA Switzerland. Sygnum has been the first swiss bank to open a metaverse hub. Metaco expanded with new clients across the globe, including Tier 1 Global banks and crypto-native institutions. From a financial standpoint, Web3 Foundation's DOT token was declared to no longer be a security from the USA's SEC point of view.

Auditchain acquired Areport to expand its global accounting, financial reporting, and auditing footprint

Crypto Valley entities have won prizes, such as Thorwallet, the winner of the start-up competition in Dubai's World Blockchain Summit in March: the judges were impressed by the vision to enable DeFi for the masses and the strong wallet's traction (Thorwallet also integrated Oxford University's Fintech incubator). aXedras made it to the finals of the Swiss FinTech Award 2022.

The focus of business development significantly diversifies from purely financial services

Crypto Valley entities also entered into various interesting partnerships in 2022: for instance, Crypto Finance partnered with Laevitas to leverage data visualization capabilities; aXedras partnered with the World Gold Council to continue building a secure, confidential, digital supply chain solution for the precious metals industry. BridgeTower Capital teamed with Securitize and Chainlink to expand offerings in staking, DeFi, and permissioned markets on Avalanche. Velas Network concluded a major new partnership with Bahamas-based digital asset investment firm GEM Digital Limited to grow Velas' positions.

# Regulatory Environment in the Crypto Valley

## A major asset for Crypto Valley

The exemplary regulatory environment in Switzerland and Liechtenstein is acknowledged as one of the major assets for the attractiveness and success of Crypto Valley. For instance, Switzerland's categorization of tokens is, for the most part, emulated throughout the world.

In the following, this framework will be reviewed and analyzed to demonstrate how important the regulatory advantage is.

The basis of a sound business environment is the regulatory framework. For companies and start-ups to flourish, they need a stable, clear, certain set of rules according to which they operate. Laws need to be stable to reduce operational uncertainty; hence, long-term decisions can be taken with a consistent framework. Rules are better if they are clear, reducing the need for legal advice, particularly where there is a direct understanding of the law. Enforcement should, of course, be a certainty. In addition, solid regulation strikes the right balance between precision and freedom: no unnecessary legal constraint should burden enterprises and innovation.

Crypto Valley is increasingly becoming a sought-after destination for companies, as it provides them with clarity and predictability. With regulatory frameworks that are both progressive and transparent, the region is providing a secure environment where businesses can flourish with confidence. The high level of expertise in blockchain technology and its applications also provide businesses with the necessary resources to develop innovative solutions.

Crypto Valley offers access to global networks enabling companies to collaborate across borders and diversify their operations internationally. In short, Crypto Valley has become a leading hub for companies seeking reliable conditions under which their endeavors can thrive.

## Strong points of Crypto Valley's legal framework

The regulatory agencies in Crypto Valley can be characterized as:

- Dynamic - Switzerland and Liechtenstein acted quickly and still work on related topics ahead of the rest of the world.
- Relatively liberal.
- Open and enthusiastic.
- Knowledgeable and precise.
- Available and close to the public: entrepreneurs may proactively discuss regulatory topics.
- Strict in the interpretation of anti-money laundering regulations.

Interestingly, the approach is different in Switzerland – where the preference is to adapt existing laws – and in Liechtenstein – where a new law has been created on purpose.

## Switzerland's role in the evolution of the global regulatory framework

Given how important a good regulatory framework is to attract innovation, it is no surprise that countries compete on that level.

Apart from Crypto Valley, a few areas emerge in this respect; in Europe, Portugal is identified as a hotspot, while the UK is reportedly losing steam; In the Middle East, Dubai is very competitive. But it is without a doubt the USA that is the most competitive. The American stage for start-ups has no equivalent for many reasons, not the least being the size of the venture capital money available there, the spirit of business risk-taking, and the sheer size of the US market. Regulatory-wise, the practice in America tends to be case-based, which means that rules are established whenever a case concludes. This is maybe why the USA has not been the fastest in presenting clear regulations for cryptocurrencies. Recent developments suggest that the American administration is tackling the topic.

Many regions in the USA, California, Florida, and Texas, are gaining a lot of traction - the regulatory work in the USA is a real opportunity for digital assets at large. For years, regulators worldwide had their eyes on which jurisprudence emerges from America. Other jurisdictions may follow suit whenever clear rules are established in the USA. But for now, Switzerland's position is cemented as a leading beacon of safety, assuredness, and transparency.

Switzerland is ideally placed as a central European country, possessing an alternative comprehensive and sound legal framework that many entrepreneurs can advantageously compare with the more burdensome and detailed framework of the EU, which is due to come into force in 2024 (MiCA Market in Crypto Asset regulation) - making Crypto Valley an assured place from

which to innovate.

## New Swiss regulatory perspectives

Despite its excellence, Crypto Valley's legal experts may propose a few ideas for further improvement in the Swiss legal framework:

- The FINMA FinTech Desk could be more efficient in answering requests. The decisions could come faster and the core contents should be made transparent to the interested community.
- Some clarifications could be given to the requirements for crypto trading platforms.
- Clearer rules are needed for stablecoins; today, their issuance is not regulated at all, and the recent issues with these tokens call for a clearer status.
- Furthermore, crypto exchange and crypto banking licenses have extensive requirements in Switzerland; proceedings are lengthy and cumbersome as the applicant needs to be very well established beforehand. This possibly explains why no significant exchange is based in Switzerland. It could be discussed if some solutions could be brought to that respect.

*With thanks for the contribution of Prof. Dr. Rolf H. Weber, Expert Attorney-at-Law.*

# SWITZERLAND'S SECRET: A NUANCED APPROACH TO CRYPTO KYC

Switzerland has long been a defender of the right to privacy. It's even written into the country's constitution: Article 13 states, "every person has the right to privacy in their private and family life and in their home, and in relation to their mail and telecommunications." Furthermore, "every person has the right to be protected against the misuse of their personal data." This is a strong and clearly-worded commitment to privacy, similar in many ways to the Fourth Amendment of the United States Constitution but even further reaching with less room for ambiguity.

Since the middle of the 20th century, Switzerland has also cultivated its status as one of the world's largest offshore financial centers. It is estimated that one-quarter of all cross-border financial assets are held in Switzerland. Swiss banks pioneered the use of numbered accounts, which are identified with a pseudonymous number. The real identity of the account holder is known only to selected private bankers. This offers an interesting parallel to cryptocurrency management, where wallets are identified only by a string of random numbers and letters.

Yet Switzerland's commitment to financial privacy and openness to wealthy foreigners has also resulted in it becoming one of the world's largest tax havens. As a global financial destination, money laundering in Switzerland is carefully monitored, which is, of course, illegal under Swiss law. Every year, the country's Money Laundering Reporting Office receives thousands of reports of potential criminal activity worth billions of dollars, and officials levied US$85 million in fines for violations of Anti-Money Laundering (AML) laws in the first half of 2021 alone. But the enshrinement of banking secrecy – a somewhat less appealing term than "financial privacy" – has led to complicated cases highlighting the tension between privacy and justice.

Cryptocurrency would appear to be both an opportunity for the Swiss banking industry and a threat to its status as a globally-significant offshore financial center. Cryptocurrency renders geographical borders largely obsolete: there's no need to fly to Geneva with a briefcase of cash to open a numbered bank account when you can create a similarly-pseudo anonymous cryptocurrency wallet with the click of a button.

But – as part of the country's slow but steady move away from strict banking secrecy – Switzerland has recognized the opportunity and worked hard to foster the innovation that crypto brings. The small town of Zug, half an hour's drive from Zurich, is at the heart of Crypto Valley, a region that is home to more than 1,000 crypto-focused companies.

There is, then, a clear incentive for Switzerland to promote an environment of innovation that allows the cryptocurrency industry to flourish without running afoul of increasingly-strict initiatives like FATCA pushed by the United States. (It's worth noting that Switzerland is ranked second in the world on the Tax Justice Network's Financial Secrecy Index, behind the U.S.).

Know Your Customer (KYC) requirements are an integral component of compliance with AML laws. If you don't know who you're doing business with, there's no way to prove that they're not subject to financial sanctions that make it illegal to handle their money.

KYC and cryptocurrency have an uneasy relationship. Many crypto enthusiasts argue that complying with KYC laws defeats the purpose of uncensorable, self-custodied accounts that anyone can open. Certainly, these arguments have some merit, similar to those used in favor of Switzerland's financial privacy laws. You don't have to look far to find instances of financial oppression that highlight the need for individuals to control their own money.

But these arguments are more challenging to apply to businesses that want to operate in the regulated world of legitimate finance. It is possible to balance the need for privacy with the ability to combat money laundering and illicit finance. KYC is a practical necessity.

Looking ahead, blockchain-powered digital identity solutions that take advantage of zero-knowledge proofs to ensure compliance while preserving users' confidentiality are on the horizon, but they're not here yet. In the meantime, we need to advocate for better KYC practices around the storage of customer data and when it's necessary to collect it. Switzerland's current laws – which allow for KYC-free crypto transactions below a 1,000 CHF threshold – are one such nuanced approach. It's better to focus limited resources on catching the truly malicious actors in the space rather than wasting time going after retail users while handicapping the usefulness and adoption of blockchain technology.

While KYC may be necessary for clients and firms operating in the regulated sphere of legitimate finance, improvements must be made. Crypto projects should undergo the same verification processes as their customers, if not more stringent ones. And customer data needs to be protected: giving criminals access to people's most sensitive data – and identifying them as crypto holders – is simply not acceptable.

The world can learn from Switzerland's strong commitment to financial privacy while working to limit the criminal activity that a completely uncompromising approach enables. Ultimately, that's what it's all about: finding a secure and workable compromise that protects users' privacy and freedom while bringing the benefits of blockchain technology further into the mainstream.

**Professor Ronghui Gu**
CEO & Co-Founder,
CertiK

# THE NEXT ERA OF SELF-CUSTODY, SELF-SOVEREIGN IDENTITY, AND COMPLIANT DEFI

*A mutable and composable NFT standard can champion self-custody and self-sovereign identities and unlock compliant DeFi use cases*

The importance of self-custody and self-sovereign identity in maintaining user privacy and regulatory compliance in decentralized applications has been top of mind recently for both users and businesses alike, especially with the recent incidents in the space last year.

However, it is important to note that blockchain did not fail — the players behind them did. The incidents around Terra, Celsius, Three Arrows Capital, and FTX have something in common: they utilized blockchain technology for their platforms, but the people behind them are responsible for business decisions regarding users' assets and falling in line with regulations.

These events only further fueled the regulatory discussions for blockchain. FATF's Travel Rules and EU's MiCA regulation are already in full swing, and the US SEC is still actively developing its guidelines for crypto-assets. However, heavy-handed government approaches can potentially impact innovation by placing compliant controls at the forefront, sacrificing user experience and privacy.

**Achieving the optimal balance between user experience, privacy, and regulatory compliance can put the users back at the center.** This balance will bring greater user adoption and build confidence for institutions to participate in the space.

## A Decentralized Solution for Decentralized Applications

MetaNFT is one solution that could achieve this balance. This third-generation standard leverages non-fungible tokens (NFTs) as a data container, **enriching traditional NFTs by adding mutable on-chain data with customizable identity management rules.**

MetaNFTs can greatly aid in advancing a compliant and decentralized ecosystem that prioritizes self-custody, privacy, and security as essential pillars.

**Self-Custody.** MetaNFTs let users take custody and management of their assets without intermediaries. MetaNFT-powered smart wallets allow users to store and manage their assets securely, as well as act as their self-sovereign identity. Wallet rules can be set up for managing the wallet, access to assets, and notifications for transaction activity.

**Privacy.** MetaNFTs allow users to control the information they use to prove their identity using verifiable credentials and zero-knowledge proofs. Verifiable Credentials can easily be added by connecting existing Web 2.0 identities (social media, emails, etc.), hardware devices, or by undergoing KYC. Users can generate zero-knowledge proofs with their authenticated information and use them to access applications while managing the information they share, with whom, and for how long.

**Security.** MetaNFTs can unlock additional layers of security through customizable rules and support for multiple authentication options, such as FIDO or hardware wallets. MetaNFTs can be used for single sign-on applications or by using blockchain-based digital signatures. Recovery rules can be set to protect users from fraud and provide a verifiable way to recover their information if they lose access.

## Mutable and Extensible NFTs Enable Compliant DeFi Applications

Traditional and decentralized industries are becoming more closely intertwined, with more businesses developing on top of and utilizing the blockchain. The key question for further adoption is how DeFi can adapt to the evolving needs of users, builders, and institutions.

MetaNFTs can advance compliance with regulations by enabling builders and institutions to define business rules and procedures they require for their users to comply with existing and upcoming regulations. With Verifiable Credentials and zero-knowledge proofs, organizations can verify the identity of their users without needing to process personal information directly. Providing flexibility and choice for users is critical to invite greater adoption and increase use case development.

As the discussions around self-custody, self-sovereign identity, and compliant DeFi will continue to increase and become more significant, **there has never been a better time to champion the principles of decentralization — privacy and transparency — especially in developing decentralized solutions for decentralized applications.**

MetaNFTs built through the Nexera Protocol are powering innovative use cases like Nexera ID, a smart wallet solution that promotes self-custody and self-sovereign identity. Nexera Protocol is paving the way for the next era of secure digital asset management and self-custody. Learn more about how this technology can benefit you by visiting www.nexera.id.

**Rachid Ajaja**
Founder and CEO, AllianceBlock

# Employment in Crypto Valley

Worldwide, 2022 has been a mixed year on the employment front in the crypto industry.

Many companies have been hit by the bear market, not to mention more direct impacts of events such as the Terra/Luna collapse and FTX frauds. Alongside a larger trend of lay-offs by tech firms (Meta, Twitter, etc.) due to disappointing company results in 2022, crypto companies have not been spared, and thousands of jobs were lost globally.

In Switzerland and Liechtenstein, however, the picture looks positive.

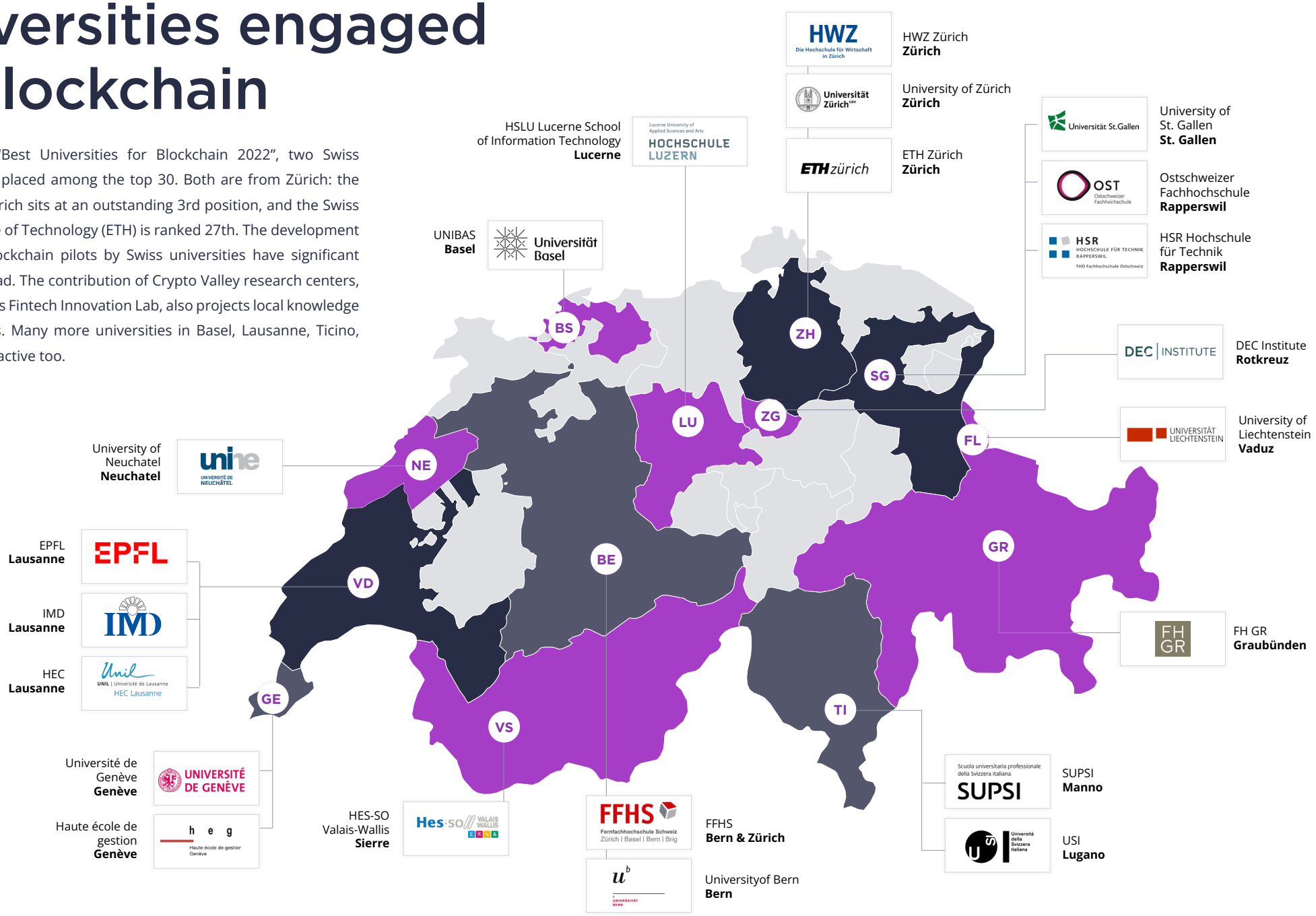
Looking at the employment data for our Crypto Valley companies, the sheer number of employees remains roughly stable year on year at around 6000 jobs (5766 in 2022 compared to 6002 in 2021, a 4% decrease). But the story is different considering the updated Top 50 subset, as the employment figures significantly increased for them, passing from 1010 employees to 1248, a 24% increase.

In itself, this should be appreciated as a very positive note given the otherwise adversarial conditions in the sector highlighted before. Past this observation it shall be reckoned that companies of the Top 50 have changed in the meantime, which means that there was both creation and loss of jobs over the elapsed year. Whilst one in five entities exited the Top 50 in 2022, the corresponding new Top 50 entrants are unique in that the majority of the new entrants are commercial companies in status.

The number of active blockchain-related companies has also increased slightly over the course of the year to 1135, up from 1128 last year. There have been 190 new companies - while 183 ceased activity - hence the relative dynamism of the Crypto Valley can be celebrated.

# Universities engaged in Blockchain

In CoinDesk's "Best Universities for Blockchain 2022", two Swiss universities are placed among the top 30. Both are from Zürich: the University of Zürich sits at an outstanding 3rd position, and the Swiss Federal Institute of Technology (ETH) is ranked 27th. The development of industrial blockchain pilots by Swiss universities have significant audiences abroad. The contribution of Crypto Valley research centers, such as the Swiss Fintech Innovation Lab, also projects local knowledge beyond borders. Many more universities in Basel, Lausanne, Ticino, and Luzern are active too.



# A CV Labs Mission - To Internationalize Crypto Valley Expertise

It is well known that Crypto Valley (Switzerland and Liechtenstein) is one of the largest and most developed blockchain ecosystems in the world, boasting a decentralized political system, a matchless business environment, and the openness of its local governments. The heart of Crypto Valley is Zug, where you will likely find more blockchain projects per capita than anywhere else. The reason for this includes Zug's low-tax policy, the business-friendly environment, and the amazing quality of life.

Over the years, the people from Crypto Valley have developed a working knowledge of what is needed to build such a proactive ecosystem and offer support to founders, startups, corporates, government, and investors. CV Labs' mission is to take this knowledge and nurture other selective regions around the globe. Thus, we are building hubs in new regions so that the experience from Crypto Valley can be extended to evolving ecosystems to facilitate the following:

- Founders can create, build and work with like-minded people
- Corporates may talk closely with founders and get access to innovation
- Investors can find early-stage startups to deploy capital
- Regulators can talk to the ecosystem participants, getting to know the pain points of founders and implement regulation that supports innovators
- Universities can carry out research and students can find work or learn how to build their own venture

Ecosystems will be connected over these fully functional hubs, meaning that all stakeholders have access not just to the regional ones but to all others around the globe. Moreover, CV VC will be part of those hubs, investing in blockchain founders with a vision and determination to revolutionize how the world works, interacts, and transacts.

Herein is an update on two of CV Labs' recent expansions.

## BERLIN, GERMANY

Berlin has become a haven for Germany's Web3 community and entrepreneurial sector. The city has fostered a creative, risk-taking atmosphere that encourages new ideas or concepts. Berliners view decentralization as an essential part of the culture and are open to embracing life's strange and gritty aspects. Germany adopted a federal blockchain strategy in 2019 to enable the potential offered by blockchain technology. CV Labs is honored to have commenced activities in Berlin in 2022, the capital of the German blockchain ecosystem. Such fertile ground has resulted in 343 blockchain startups, the third highest in the European region, next to Switzerland and the UK. With the majority of these based in Berlin, it seems that blockchain companies are using Berlin as an indicator for success: Meanwhile, 25 of Germany's 50 Unicorns are based in Berlin. Of course, this also attracts VCs and accelerators, further promoting the industry. The first CV VC German Blockchain Report, published in November 2022, shows that 90% of recent blockchain funding went to startups in Berlin.

The German blockchain world is thriving, it is a beacon in the global ecosystem, regularly top-rated, and many other industries are benefiting in the process.

As summarized by Sven Wagenknecht, Editor-in-Chief of BTC-ECHO: *"For this ecosystem to continue to grow and prosper, we need to build bridges between the old and the new world. We need pioneers like CV Labs who understand the potential of the technology and, above all, help young companies put their ideas into practice. Because in the logic of Web3, it's more than ever – especially compared to Web 2.0 – about cooperation. Lone fighters who isolate themselves don't stand a chance. This is about nothing less than giving the term "network effects" a new, positively connoted meaning."*

**Ulrike Lierow-Schad**
Managing Director,
CV Labs Berlin

## AFRICA

It has been a memorable year. Africa is one of the few markets where start-up and blockchain funding is outpacing the previous year. Launching CV VC and CV Labs Africa in South Africa has proved to be a key decision as it's clear that it provides a soft landing to build out the Web3 ecosystem in Africa as the country acts as a gateway to the continent.

CV Labs has enabled an incredible exchange of Swiss knowledge to African ecosystems, resonating strongly with the community. CV VC investments in 7 start-ups across Africa's key markets - South

Africa, Ghana, Kenya, Nigeria, and Egypt - are a testament to our commitment to the dynamic continent.

Our competitive advantage in the fast-evolving African market is that we have a wealth of experience, with our founding team being instrumental in the buildout of the Crypto Valley ecosystem into Africa. It has also brought a great deal of trust with other stakeholders as the Swiss and CV VC/ Labs brand is exceptionally credible.

We have worked with partners, including the Swiss government, which provided funding and support for our launch into the region for the first 12 months. To further contribute to the theme of collaboration, we are operating a CV Labs hub in partnership with the leading South African coworking company, Workshop17.

CV Labs Africa has delivered 16 events across 3 African countries and established strategic partnerships with some of the world's leading blockchain players, such as Polygon, Casper Labs, and Lisk. On a local level, we are partnered with VALR (Africa's largest exchange) and Standard Bank (the continent's biggest bank). Additionally, the CV VC African Blockchain Report, published in partnership with Standard Bank, gained over 700 million impressions worldwide - highlighting the interest in Africa and its true use cases for the technology.

**Gideon Greaves**
Managing Director,
CV Labs Africa

# BLOCKCHAIN IS CROSSING THE CHASM

**Geoffrey Moore described the breakout point of any innovation from experiment to adoption - as the chasm. After a little more than a decade, Blockchain is close to crossing that chasm.** Blockchain has not yet fulfilled all the hopes we have put into it. That is not a sign of defeat but rather mirrors where we are in the innovation cycle. Today, there isn't so much of a technical hurdle to mass adoption. Instead, there is a gap in technical capabilities and capacities, education, and perception.

The biggest challenge the blockchain industry has faced and continues to face is the question of regulation. Despite its immense potential, the technology's applications have yet to be widely adopted due to a lack of clarity around the legal landscape. This has allowed events such as FTX and Terra Luna to take place in a regulatory grey area, raising concerns among many. It is important to note that blockchain is not limited to just cryptocurrencies; it is utilized in various sectors, from real estate and supply chain management to insurance. As a result, businesses require more transparent regulations to reap the full rewards of blockchain technology and drive innovation in these sectors.

## Putting houses on the blockchain

Real estate is an example that depends on good regulation. Blockchain allows owners to fractionalize property. You can take a villa at Lake Como in Italy and split the ownership in one million fractions, each represented by a token. Most people want to invest in real estate, knowing its natural scarcity makes it a valuable asset class.

Here we come back to regulation or the lack of such. Tokenizing real estate is a financial service; companies that offer a market for it must be licensed. In many jurisdictions, retail investors are disallowed from buying shares of real estate funds, putting many projects in a deadlock.

On the other hand, Dubai has made great strides to legalize and support real estate blockchain services. The UAE is an incredibly competitive economy. Its regulators have realized that tokenization and blockchain technologies can reduce trade friction and open new markets. Dubai has embraced blockchain.

In a sense, Dubai is a magnifying glass. It is small and very fast at innovation. It is a place where people don't think too long. They just implement it.

## Decentralized finance still a driver for adoption

Despite recent events with FTX and Terra Luna, decentralized finance is still one of the most promising decentralized industries. People desire the freedom to take their finances into their own hands. Additionally, decentralized finance will likely not fail. Failing individual actors - even if they fail spectacularly - are part of the innovation cycle.

The dot-com bubble was not bad, and neither is crypto. It is all about 'who survives' and 'what is their strategy for survival.'

## Transitioning firms from Web2 to Web3

Apart from DeFi and real estate, all eyes for blockchain adoption will be on transcending Web2 companies to Web3. This is already happening - from Prada to Porsche - companies adapting the metaverse, launching NFTs and loyalty programs.

There is an argument to be made that Web2 firms might be the better drivers to adoption - they already have their communities, and those are the backbone of most Web3 activities. They also have functioning business models and operate at scale. For them, Web3 is just one more tech stack. They have to adopt that tech, but they don't have to bet the house on finding product/market fit.

## Investing in a bear market

The past two years showed a significant influx of venture capital in the space, and VCs stepped on each other's toes to secure deals. This led to crazy valuations of 50:1 or 100:1 for startups that had never earned a single Dollar. The dopamine rush of getting deals is understandable. But it had to crash, and it crashed in May 2022.

But that is maybe not at all bad. The market has calmed down. Good projects still need money without the excess of forced hypergrowth in absurd timespans. Projects that raised funds in 2021 and early 2022 asked themselves, 'how much money can we get in'? Now they should ask, 'what is the smallest sum we need to build and survive.' Investors also have an upside in crypto winter - they get far cheaper tickets now.

## Building Web3 apps that will amaze tomorrow

My own company, Lisk, is a layer-1 blockchain. It creates a platform for projects and companies to build their Web3 applications. While we are mainly an infrastructure provider, we naturally think about what should be built on Lisk. Apart from the use cases I described above, what I want to see is a Web3 social media platform.

More and more users realize the disadvantages of a centralized social media platform like Twitter. The whole community is at the mercy of a single owner. They have no control over their content and data, and people have become more aware. Now is an excellent time to build a truly decentralized Social Media platform.

There is a reason for the catchphrase: one should sell in the time of hype and build in winter. And that we shall.

**Naureen Mustafa**
Head of Exchange Development, Lisk

# 02

# OVERVIEW OF TECHNOLOGICAL & BUSINESS INNOVATION

# Overview of Technological & Business Innovation

Innovation carries on in the field of blockchain. As distributed ledger technologies impact many industries and disciplines, it comes as no surprise that progress is happening in diverse fields of development, including:

- In cryptography, including research on post-quantum cryptography and ways to provide satisfactory privacy/confidentiality on-chain.
- In the blockchain infrastructures themselves, especially with regard to scalability and interoperability of chains. The Merge on Ethereum was long-awaited, and its success marks a significant milestone.
- In the development of more advanced DApps (Distributed Applications), leveraging scaling infrastructures and providing them with governance, including a wide variety of DeFi applications.

This section touches upon innovation topics that are particularly relevant at the moment.

DFINITY

# A FULLY DECENTRALIZED INTERNET - A TRUE "WORLD COMPUTER"

## Yes, it is possible to live in a fully on-chain world.

While decentralization is a core value in the crypto ecosystem, the reality is that most blockchains depend heavily on centralized Web2 infrastructure to make their offerings usable to end-users, such as the usage of centralized cloud computing services like Amazon Web Services.

For instance, the usability of services like exchanges is generally dependent on Web2 infrastructure—like cloud-hosted websites, mobile apps, browser extensions, etc.

However, the Internet Computer blockchain (ICP) is quickly changing crypto's dependence on Web2 services of any kind, with on-chain transactions operating at web speed, obliviating the need for centralized cloud computing.

**Yes, it is possible to live in a fully-on-chain world wherein Web2 infrastructure and the centralized systems it depends on are no longer needed for front-end usability.** Builders can now host Web2-style applications (websites, mobile apps, etc.) entirely on-the-blockchain with web speed—making ICP a decentralized alternative to the current public internet itself.

## Social media & chat apps - fully on-chain

Despite slowed growth for the crypto industry as a whole, the number of developers, services, and users hosted by the Internet Computer blockchain has grown rapidly over the past year. At the time of writing this, ICP processes almost half a billion transactions per day, including the pre-finalized "query call" transactions involved with serving a web experience. This is significantly more transactions than any other blockchain processes daily—and at a significantly reduced cost (and energy load!) per transaction.

**Importantly, this high transaction volume directly results from the Internet Computer's unique capacity for hosting fully-on-chain social media services entirely from smart contracts.**

Today, several social media and chat/messaging apps are running entirely on the Internet Computer blockchain—with no Web2 integrations needed on the front-end. Decentralized apps (Dapps) on the Internet Computer run entirely on chain by processing HTTP requests and processing and storing every individual text message, photo, and video that end-users send on the blockchain using "update calls" (i.e., traditional transactions). Through this technology, the Internet Computer is eradicating the need for centralized cloud computing for hosting social media services—thus creating a truly decentralized foundation for social media applications.

## Any application can be run by a DAO

Perhaps even more significantly, the Internet Computer makes it possible for developers to assign complete control of Web3 social media platforms to Decentralized Autonomous Organizations (DAOs). In other words, the Internet Computer allows builders to turn over control of their platforms to end-users by assigning complete control to DAOs via the creation of ICP "system nervous systems" (SNS) protocols.

**The implications of this are massive. Imagine if networks like Facebook or Twitter were run by their end-users rather than a small handful of executives and developers. This is the promise of truly decentralized media platforms—user-led governance enforced by code.**

Smart contracts can only create, update and configure other smart contracts hosted within the blockchain environment and cannot, for example, exert control over centralized cloud computing services like AWS. This means that a DAO built using smart contracts can never take complete control over a Web3 service whose architecture involves traditional IT. Because Web3 services on ICP can be built entirely using smart contracts, it is now possible for the first time in history—to run a Web3 service under the complete control of a DAO, allowing the service to run in the mode of an autonomous protocol.

## Moving into a fully-on-chain era

Ultimately, the promise of a truly decentralized internet that is a true "World Computer" upon which the broadest possible range of internet services can exist amongst distributed computers has come to fruition in the form of the Internet Computer blockchain (ICP). Through development on the Internet Computer, Web3 applications can now exist truly independently from Web2 integrations—allowing us to finally move into *a fully-on-chain* era.

**This is the future of crypto: a truly independent Web3—free from the need for centralized servers, Web2 integrations, and other trusted intermediaries.**

**Dominic Williams**
Founder and Chief Scientist, DFINITY

BRIDGETOWER CAPITAL

# THE GATEWAY FOR PARTICIPATION OF INSTITUTIONS IN WEB3

Like all nascent industries, the blockchain ecosystems have experienced another defining moment at a time when skepticism has become more public and skeptics more vocal. Despite the egregious and unacceptable behavior of a few bad actors, the vast majority are not bad actors, they are the opposite! The fact remains blockchain technology is here to stay and this weeding out process, while difficult, is necessary to vet out and allow the real companies to step up. Even the best will fall short and honest mistakes will be made, but the core is strong, and many are seeing the value of partnerships and eithics.

What will be required to see that 2022 is a launch pad for good companies, better models, compliant products, transparency, and global expansion of the blockchain? Here are a few we believe can add value:

**BridgeTower Capital** is company founded on traditional business principles, The company, founded by Cory Pugh, has one guiding principle, give more than you take and deliver value through a unique offering of Tokenization, Securitization, Ecosystem Integrations and Capital Markets services. BridgeTower offers unmatched capabilities to help its partners navigate the challenges involved with digitizing assets and accessing blockchain-based markets. BridgeTower's in-house, proprietary technology is the culmination of years of blockchain-native experts building to solve the market's most challenging problems.

## Tokenization

Tokenization can migrate financial products & real-world assets to the blockchain for faster, cheaper, and more secure settlements which will open the door to greater liquidity and larger markets for real world assets. A new standard of high-performance technologies and validator nodes are needed to secure the network and earn rewards. The blockchain enables Ethereum compatible tokenization opportunities with unique and safe features like BridgeTower's proprietary ERC-1155p (permissioned) standard along with storage & custody to ensure proper regulatory compliant transactions.

## Securitization

Many financial institutions face regulatory roadblocks given their charters and required licenses which prohibit participation in the Web3 economy. One solution that can bridge the gap of entry lies in the ability to construct Web3 products in a form that meets regulatory requirements. The most universally accepted construct of financial products is known as a Security. While there is an argument to be made that not all financial products are securities, the fact remains institutions are more likely to consume a product that has been constructed in a manner that meets securities laws. BridgeTower will launch its first if many Staked Security through several global regulated exchanges starting in January.

## ESG values & compliance prioritized blockchain infrastructure is becoming a reality

On September 15. 2022, Ethereum made its historic transition to a Proof of Stake (PoS), Ethereum forked away from producing blocks through the energy-intensive process of Proof of Work (PoW) mining. As a result, the electricity consumption of Ethereum declined by over 99%. For all the major changes that the Merge brought to Ethereum, the upgrade has proved to have minimal impact on end users and companies. The lack of any noticeable network disruptions caused by the change affirms the success of the upgrade and security of the blockchain protocols. One company which helped with the transition and now took over securing Ethereum is BridgeTower Capital. The company is one of the largest staking operators for Ethereum, with more than 8,000+ Validator Nodes. It operates with 100% renewable energy in multiple locations including Switzerland ensuring ESG values & compliance for all blockchain protocols.

**Cory Pugh**
CEO, BridgeTower Capital

# DeFi

## A short history of DeFi

Decentralized Finance (DeFi) points to financial services deployed on a blockchain platform. In DeFi, peers are able to engage in interactions in a permissionless fashion. These interactions are financially meaningful because they rely on on-chain, accounted tokens (cryptocurrencies) that have a market value. Third parties and centralized institutions are removed from these processes, thereby offering innovation with respect to legacy financial services.

DeFi has existed, strictly speaking, since the inception of the Bitcoin network. It became possible to talk of DeFi with its ability to transfer value without the need for a trusted third party. But, of course, the promise of distributed computing services, starting with Ethereum, truly opened the outlook for more complex automation of direct financial interactions between peers.

The history of dedicated DeFi protocols already counts a few episodes. The ICO craze as a result of Ethereum Smart Contracts (through its innovative ERC20 tokens) opened horizons, and rudimentary versions of decentralized exchanges were working as soon as 2017. But they blossomed in the summer of 2020 when the wider public discovered a way to invest and exchange cryptocurrencies outside traditional, centralized markets. Several DeFi applications appeared to gain traction: yield aggregators (such as Yearn Finance), lending and trading platforms, and automated market-making logics were under the spotlight.

Total Value Locked (TVL) in DeFi applications built on all the blockchains peaked in May 2021, exceeding 150 billion USD at that point in time. At this stage, DeFi is characterized by a collection of decentralized finance projects that aim to improve on the previous efforts. The movement focuses on improving liquidity, scalability, governance, and security; innovations such as insurance for smart contracts, impermanent loss insurance, and self-repaying loans came to the mainstream.

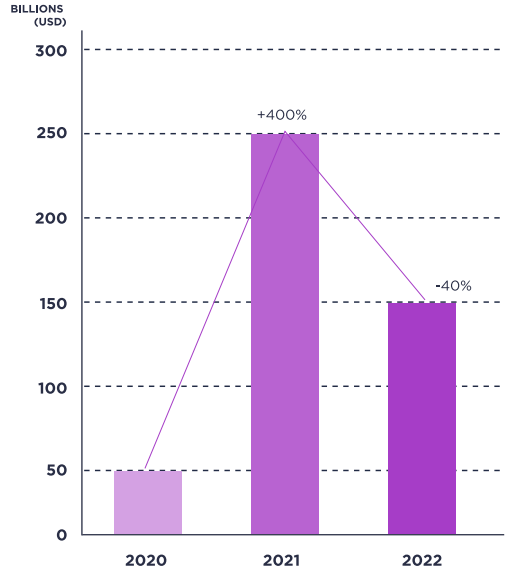
In 2022, with a new crypto winter that arrived, DeFi centered on aggregating yield farming mechanisms across different crypto chains and, at times, opportunities in traditional asset classes. The aim is to improve the overall ecosystem by creating common security standards, devising a technical framework to build products that promote multi-chain access, and promoting shared information on market and business trends amongst its members. DeFi areas under the spotlight are flash loans, tokenization, virtual land leasing, GameFi, etc.

## Significance and momentum of DeFi in 2022

Based on the market convention, Total Value Locked (TVL) is the most commonly adopted value indicator to assess the market size of the DeFi sector. In the second half of 2022, the total value locked in DeFi protocols is around 150 billion USD, down from 250 billion in 2021 but still up from 50 billion in 2020. When comparing with the loss of total crypto market cap of almost three quarters over the period, and given that the fiat value of TVL depends a lot on the price of Ether (ETH), this indicates that the momentum of DeFi protocols is still quite strong, if not net positive.

Some critical voices about the appropriateness of TVL as an indicator to assess the size of players in the DeFi sector are being heard. First, there is a strong correlation between the historical price of ETH and the TVL locked-in DeFi applications, given that still, around 60% of active DeFi dApps are built and mostly operate on the Ethereum platform. The dominating impact of ETH's value over TVL by DeFi is likely to distort the market scale of DeFi and to let the combined market valuation of DeFi be directly exposed to the volatility of cryptocurrency, especially ETH.

**TVL IN DEFI PROTOCOLS**




Other alternative benchmarks for DeFi applications include:

- Number of wallets or number of wallet users: this metric is a good way to understand how popular the protocol is.
- Utilization Rate: for lending protocols, it indicates the percentage of the deposits that have been lent out. A high utilization rate indicates more risk as insufficient collateral may be left to cover depositor withdrawals or allow liquidators to close positions.
- Number of Liquidity Providers (LPs): a higher number of liquidity providers is usually better. Supposing a protocol having a large number of LPs. In that case, there is a "safety

in numbers" effect, as it is less likely that any single departure could cause liquidity issues for the protocol.

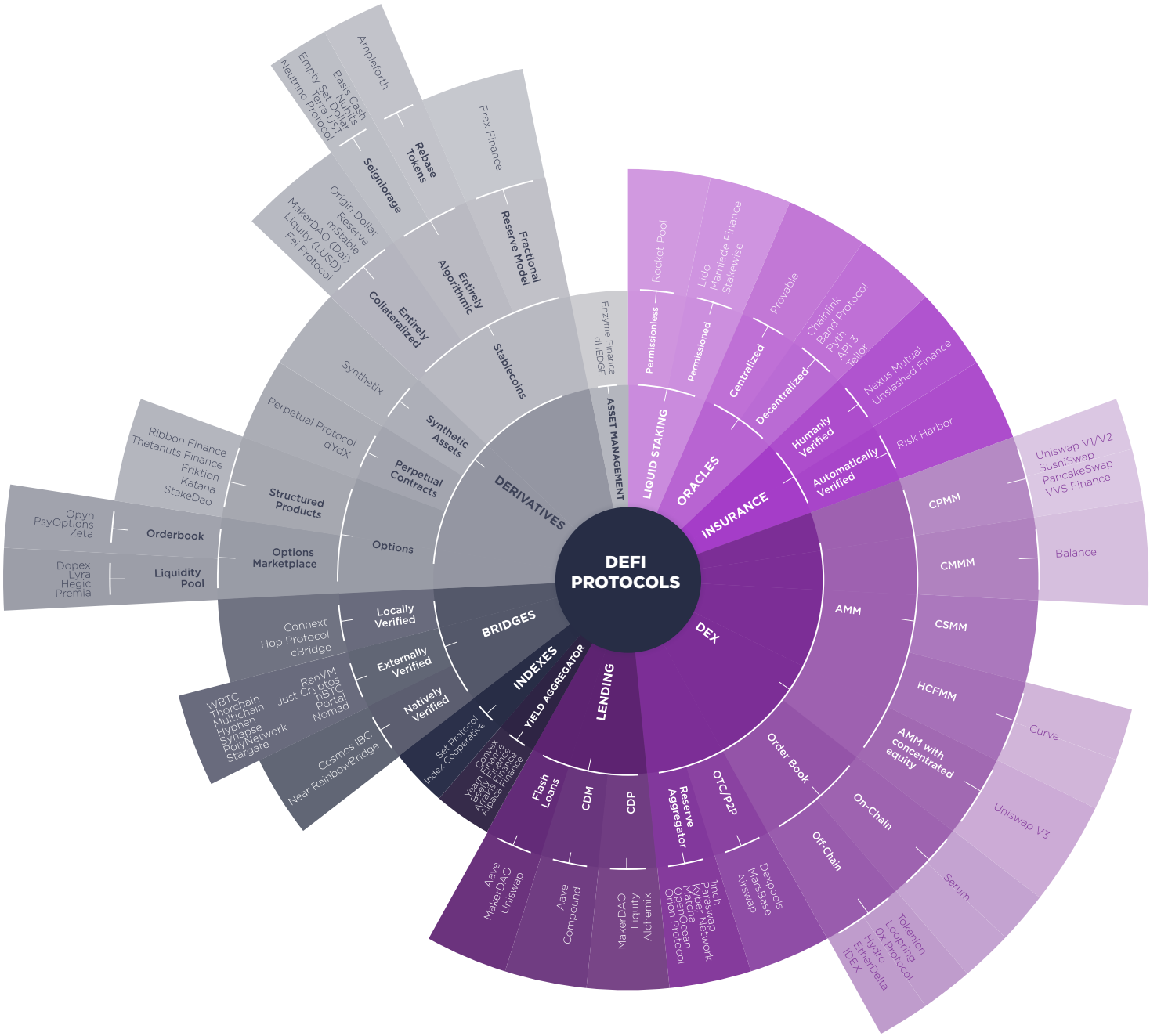
- Transaction Count: a high transaction count usually means more active pools. This is generally good as it signifies the protocol is being used. Ideally, the transaction count trend is also upward, signaling an increase in popularity and adoption.
- Transaction Volume: a higher transaction volume is generally good when paired with many LPs.
- TVL/Market Cap: Utilizing the ratio of TVL to market cap removes the price volatility inherent in both metrics. The ratio bases the TVL on the total market cap of the token, which can work as the "% of the token supply which is being utilized in a pool."

It is interesting to hear that a number of DeFi protocols are gaining active wallets. That observation concurs with the insights from TVL in the fact that overall, DeFi is not dramatically losing active users.

It may be pointed out that the failure of centralized exchanges such as FTX, by comparison, highlights the interest in decentralized protocols and DeFi as a whole.

## Demystifying the DeFi landscape

Within a short span of 3 years, we have witnessed a big-bang proliferation of DeFi protocols. There are multiple ways of categorizing DeFi applications; on the right is one proposal to to construct an understanding of the current DeFi landscape.



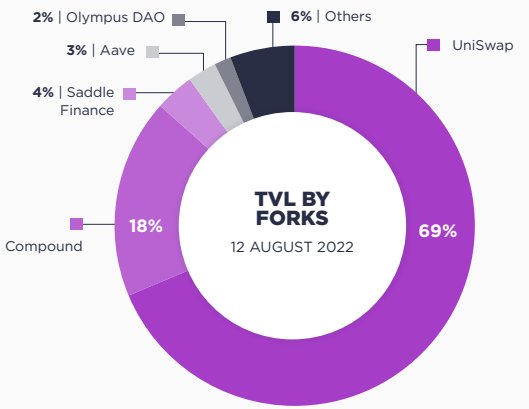
Starting in January 2022, CV VC & CV Labs joined an initiative led by the Swiss FinTech Innovation Lab, at the University of Zurich to perform a taxonomy study in an attempt to classify DeFi by select criteria in the measurement of TVL and the number of active protocols. Only those DeFi protocols which satisfy all three of the following criteria have been selected:

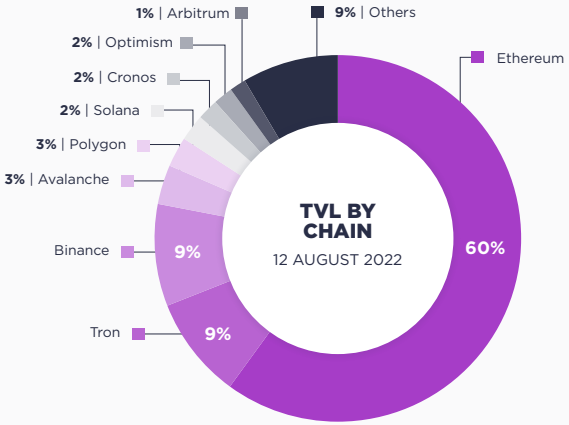
(a) the DeFi protocols built on Top 10 chain platforms, including Bitcoin, Ethereum, Terra, BSC, Avalanche, Fantom, Solana, Tron, Cardano, and Cronos. The blockchains mentioned above are ranked as the top ten blockchains regarding their respective TVL tracked by DeFi Llama;

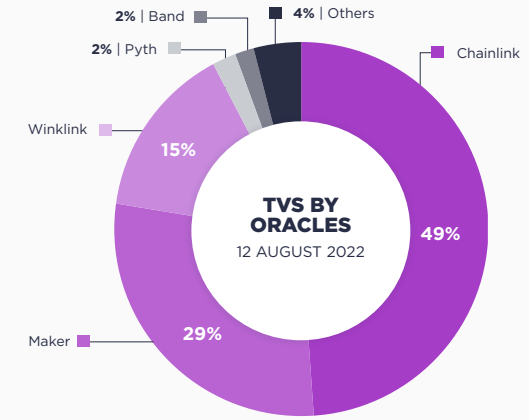
(b) the DeFi start-up exceeds a TVL of US$ 1 million tracked by DeFi Llama; and

(c) the DeFi protocol is actively operational. The activeness is evaluated by examining whether there is non-zero price volatility over the window frame of 1-Day/7-Day/1-Month changes tracked by DeFi Llama and the availability of the underlying codes and the respective websites.

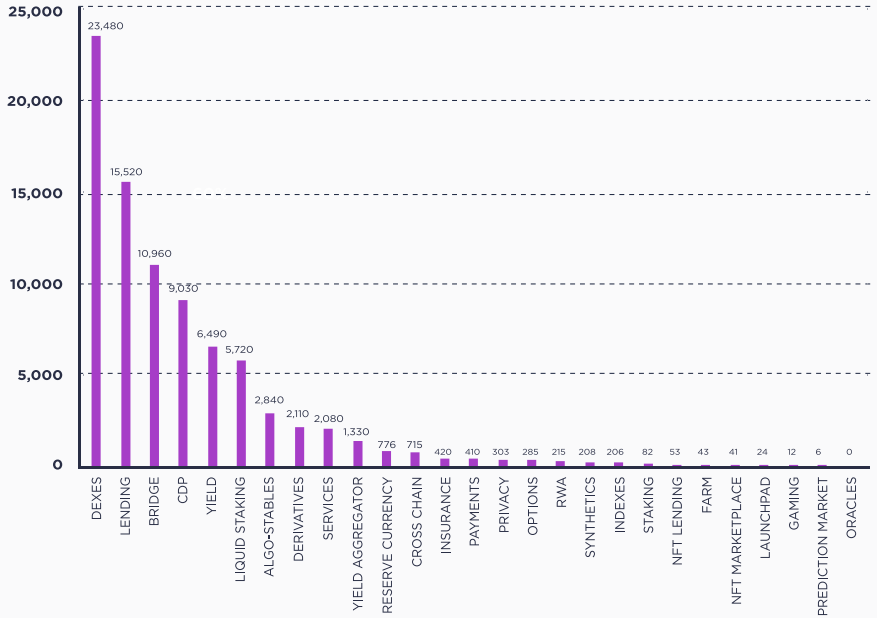
The key findings based on the data extracted from DeFi Llama in August 2022 are presented hereafter.



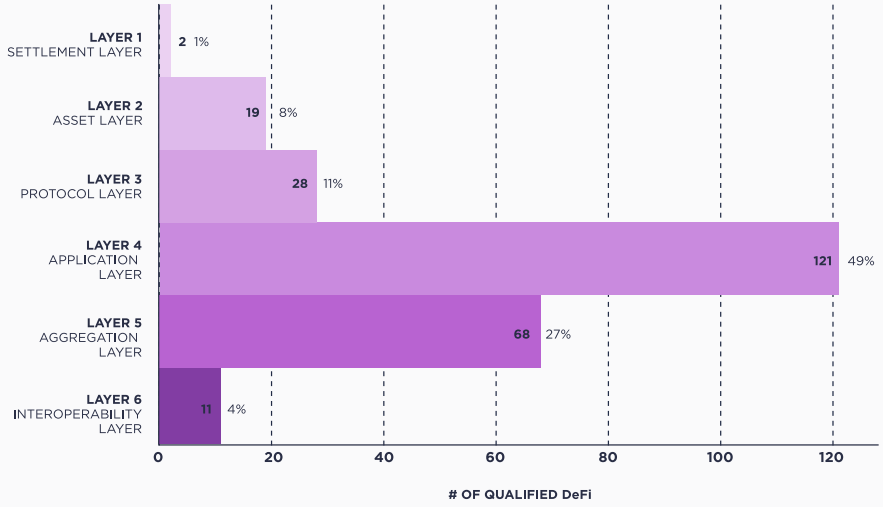




## TVL BY USE CASES & NUMBER OF PROTOCOLS




## IT STRUCTURE



# Overview by Segment of DeFi Protocols

**We will highlight the key types of DeFi protocols. Other smaller fields of the current DeFi landscape include asset management, indexes, oracles, bridges, and liquid staking.**

## DECENTRALIZED EXCHANGE (DEX)

*(~28% of TVL; ~28% of DeFi protocols)*

DEXs are marketplaces built as distributed applications. They are able to connect buyers and sellers in a permissionless fashion, removing any central authority to oversee and authorize trades and relying on smart contracts instead. Users retain control of their funds, as they need to ensure their self-custody of crypto assets.

There are 4 major types of DEXs:

- Automated Market Makers (AMM) AMMs: are built to control exchange rates thanks to a certain algorithm. The most common AMMs work thanks to a liquidity pool consisting of at least two assets, where the combined asset reserves must remain unchanged.
- Reserve aggregators: they are designed to source liquidity from various liquidity pools and try to return the best rates by comparing all prices from liquidity pools and splitting a single trade transaction across multiple DEXs.
- On-chain/off-chain order books: there, users can issue orders that are aggregated in an order book and matched through a matching algorithm
- OTC/P2P exchanges: they allow users to swap tokens with counterparties by negotiating the exchange rate bilaterally and in case of an agreement, to execute the trade on-chain

## DERIVATIVES

*(~3% of TVL; ~2% of DeFi protocols)*

In the classic financial world, a derivative refers to a contract agreed regarding an underlying asset. The price evolution of this asset then determines the value of the said contract. Derivatives protocols make financial "products" such as options, futures, and other kinds of synthetic contracts available to the broader DeFi ecosystem.

Thanks to smart contracts and oracles, all varieties of classic derivatives can be replicated. They are to form a subset of any bet that can be coded on distributed ledgers.

## DECENTRALIZED STABLECOINS

*(~4% of TVL; ~5% of DeFi protocols)*

Stablecoins propose a way to bridge the gap between fiat currencies and cryptocurrencies by deploying fiat-pegged tokens whose transactions are recorded on a distributed ledger.

In contrast to the centralized stablecoins such as USDC or USDT that are supposed to be on-chain representations of reserve fiat money (e.g., US Dollar), decentralized stablecoins are fully transparent, non-custodial, and are not backed by any central authority. They can be differentiated by the way that they are supposed to maintain their peg:

Crypto-backed stablecoins. These are also collateralized but backed with cryptocurrencies such as Bitcoin or Ethereum rather than fiat currency. Given the volatility in token prices, over-collateralization is the norm.

Algorithmic stablecoins aim to maintain a price peg using an algorithmic process instead of collateralization. They attempt to do this by using smart contracts to control the circulation of the coins. However, many such stablecoins have failed to maintain their peg.

Hybrid stablecoins. These combine elements of both collateralization and algorithmic rules.

## LENDING

*(~19% of TVL; ~9% of DeFi protocols)*

Lending and borrowing are basic needs in any financial system. Hence they are vital services to deploy as part of a DeFi ecosystem.

Lending protocols allow users to borrow and lend assets in a decentralized and permissionless way. To ensure that the borrower pays back the borrowed funds, platforms usually require collateral tokens to be locked when minting new liquid assets, with algorithmic mechanisms to manage the cases of shrinking collateral value. Popular lending protocols include AAVE, Compound, Maker, and KAVA.

## INSURANCE

*(~1% of TVL; ~1% of DeFi protocols)*

DeFi insurance is a pooling of risk and refers to insuring users against losses caused by events in the DeFi industry such as exchange hacks, attacks on DeFi protocols, smart contract failures, or stablecoin price crashes. Coverage buyers pay a premium to be covered in a case a specific event happens. If the covered event happens, the user can file a claim and get covered by a

decentralized pool supplied by insurance providers who choose which events they provide coverage and earn yield over the capital they have locked from the premiums paid. The verification process can be automated or human, depending on the complexity. Examples of lending protocols include Nexus Mutual, Solace, and Insure DeFi.

## YIELD AGGREGATORS

*(~2% of TVL; ~3% of DeFi protocols)*

A yield aggregator is a set of smart contracts that build on top of existing DeFi applications. It proposes to pool investors' funds and automatically invest them in yield-generating protocols according to predefined strategies to maximize the return for the investor (=yield). In this fashion, users do not need to elaborate their approach: the protocol automatically allocates and re-allocates the funds between other DeFi protocols. One further advantage is socializing gas fees, thereby lowering the cost for each user.

The process of generating a yield on crypto assets is hence termed "yield farming." Yield farming relies on other building blocks in the DeFi stack, such as the Automated Market Makers, lending protocols, and liquid staking protocols. Examples of popular Yield Aggregator platforms include Yearn Finance, Harvest Finance, and Convex Finance.

*With acknowledgment to the research performed by Marine Huang from the University of Oxford during her academic attachment under the Swiss FinTech Innovation Lab, University of Zürich*

# DRIVING THE BLOCKCHAIN REVOLUTION INTO THE WORLD

**Blockchain can act as a vehicle for trust. Its core characteristics of transparency and traceability foster credibility in any use case.**

Innovative and meaningful applications of blockchain show how the technology can be leveraged to improve current as well as future financial and social systems. In fact, blockchain's ability to inspire both trust and accountability makes it not just a perfect mechanism to prompt positive change in society but a crucial one for the challenges of today's world. Each effective, scalable use case brings blockchain one step closer to its potential and can firmly reposition this unique technology as a force for good in 2023.

This is what drives the Cardano Foundation, and it implies simultaneously ensuring the technology's operational resilience and its significant adoption. The Foundation therefore remains active in preparing blockchain technology for mission-critical applications, often collaborating with the community, supporting academic research, and fostering the open source maturity of the ecosystem. At the same time, the Foundation also works to drive the adoption of blockchain in a range of use cases that demonstrate exactly how this technology may help change the world for the better. The Cardano Foundation's latest Annual Global Impact Challenge, with the involvement of Switzerland for the United Nations High Commissioner for Refugees (UNHCR), is a prime example of this commitment.

## Innovation Meets Humanitarian Aid

After an inaugural Impact Challenge that wielded blockchain to verify sustainability efforts, now the collaboration with Switzerland for UNHCR, the national partner of the United Nations High Commissioner for Refugees in Switzerland and Liechtenstein, again directly employs blockchain's tenets of trust and transparency. The initiative will use the Cardano blockchain at the foundational layer to explore traceability and transparency in donations, with the assistance raised going directly towards aiding forcibly displaced people. Moreover, a dedicated Charity Stake Pool allows for unique options in accessing the blockchain community on their own terms. In turn, the community-driven nature of the project invites wide participation, contributing to expanding the initiative's scope and increasing its success.

This second Impact Challenge will allocate 20% of the support generated to explore innovative projects, while 80% will serve on-the-ground missions. Since blockchain creates a transparent, traceable, and verifiable record of transacted data, harnessing these characteristics helps donors perceive the effective use of their contributions in assisting forcibly displaced people—certainly, an extremely worthwhile cause.

## Protecting Wine Authenticity

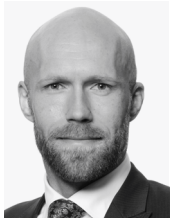
The Cardano Foundation has also established a partnership with Georgia's National Wine Agency, aiming to bolster the country's international reputation as a premium wine producer by creating permanent, immutable, as well as verifiable records on the Cardano blockchain. Devising a track-and-trace solution on Cardano represents a scalable, cost-effective option to ensure the authenticity of Georgian wine and address counterfeit issues; it will improve transparency for wine producers and consumers alike. Additionally, it gives wine producers the potential to engage with a novel form of distribution and product discovery, potentially leading to new business models.

The pilot program currently underway, which will see up to 100,000 bottles of wine equipped with exclusive QR codes, builds on the Foundation's previous partnership with Baia's Wine and is a game-changer for the industry. With the data reported and compiled in public, verifiable records available on the blockchain, consumers can easily check the authenticity of the product. It not only enhances trust in the product but also creates awareness about its origin, characteristics, and development. The engagement generated helps to drive both exports and sales.

## Looking Forward

The ongoing focus on blockchain utility and its everyday application may change the perception of the technology for the better. Indeed, it will play a vital role in setting blockchain as a force for good while also upgrading current systems, rebuilding trust, and significantly contributing to solving some of society's pressing issues. In this sense, 2023 seems positioned to become a fundamental turning point for the blockchain ecosystem.

The Cardano Foundation will keep working towards blockchain adoption and to ensure developers have the necessary tools to innovate and collaborate on the blockchain. Building together will facilitate the emergence of new and inspiring use cases.



**Frederik Gregaard**
CEO, Cardano Foundation

# "THEN THEY LAUGH AT YOU." HOW WEB3 WILL GO MAINSTREAM

Blockchain technology is a fundamentally new way to manage data. It changes how people communicate and transact in ways that would have been difficult to imagine before the publication of the Bitcoin whitepaper. In short, the decentralized governance, transparency, and immutability built into the architecture of blockchains have vastly expanded what is possible and offer better solutions for mainstream users.

Of course, as with any new technology, mainstream adoption doesn't happen in a straight line up and to the right. In the end, better technology is why no one today is listening to a Walkman, there were hiccups along the way, and Web3 will experience those as well. Critics will doubt the validity of the new model—until they don't.

The question is what will cause blockchain technology to cross from early adoption to acceptance by the masses. In short, the answer is Web3 applications that address real-world challenges. When accessible applications solve actual problems in the daily lives of regular folks, adoption will come fast.

We're not there yet, though. However, at this point, crypto is difficult to ignore. In Gandhi's famous formulation, we are probably at the stage when traditional industry laughs. And to be fair, it's not difficult to find a reason to at least ask questions when perusing the news over just the past year. Nonetheless, through it all, the fundamental promise of the technology remains the same as it has always been—to enable transparent, self-governed transactions between individuals.

Still, before we can reach the mainstream, there is a final element that is required: privacy. For example, although election security would be strengthened by doing so, storing votes in a public blockchain so that every individual's vote would be freely visible would have a chilling effect on our democracy. Likewise, if every one of our financial transactions were immediately viewable by our friends and family, we would quickly find another way to conduct our affairs.

In this context, there has been much recent discussion around zero knowledge technology—particularly so-called "zero-knowledge proofs" or "ZKP"—touting it as the potential answer to this challenge. In the simplest terms, zero-knowledge proofs enable one party to prove an assertion (e.g., knowledge of a password) without revealing the underlying evidence (i.e., their actual password). Unfortunately, these mathematical proofs require intensive recursive computations. Furthermore, extending ZKP to prove multiple assertions from multiple parties adds exponentially to the calculations necessary, making it untenable for all but the simplest use cases.

Partisia Blockchain uses alternative technology to enable developers to build privacy into applications that address some of society's greatest challenges. Not to be confused with ZKP, multi-party computations (MPC) present a more scalable approach. In short, with MPC, private data is split into pieces among multiple parties in a network such that no individual among them can see it in any meaningful context. Then, MPC allows analyses across the network while the initial data inputs remain private—without the intensive recursion of ZKP. The result combines the best of both worlds: scalable privacy and the auditable, immutable, and secure data of the blockchain.

Already a number of projects are accessing this new technology. For example, a next-generation search service uses our foundation to turn the ad-tech model on its head, paying ad revenue to users and keeping their data private. Another team is working to stem the corruption that plagues the massive global procurement market with a blind RFP process. Others are building on our platform to give atypical entrepreneurs a fairer shot at investment. Finally, in a recent example that we are exceptionally proud of, Partisia Blockchain and the International Committee of the Red Cross demonstrated the prototype of MPC-powered private stablecoins that could protect aid recipients in global conflict zones. It was a poignant illustration of the potential of Web3 technology.

If we return to Gandhi's words, we know that the fight is coming next. So we won't be surprised to see more hearings, investigations, and possibly regulations in the coming months. There will undoubtedly be pushback from the traditional industry as well. But particularly with the advent of multi-party computations and other key technologies, we also expect to reach the last stage in the phrasing when all of us benefit from privacy-protecting, decentralized solutions.

**Brian Gallagher**
Co-founder, Partisia Blockchain

# Decentralized Autonomous Organizations (DAOs)

Decentralized Autonomous Organizations (DAOs) are as their name tells: (1) organizations, i.e., gather and coordinate partakers, stakeholders in whichever endeavor; (2) decentralized, which means that they are a set of coded logics proposing a governance format according to which the organization manages itself; (3) autonomous, claiming that it is sovereign and its existence shall not depend on any authorization body.

In the search for the "next big thing" in crypto, DAOs are a strong candidate. Here we briefly demonstrate what can be expected from them.

## Brief history of DAOs

Distributed Autonomous Organizations are hardly a new concept – as soon as decentralized permissionless data processing became near possible, DAOs were an immediate objective.

In 2016, "The DAO" exploit on Ethereum remains, maybe until today, the most famous example of a smart contract breach and has no doubt tarnished the reputation of DAOs at large. The attempt was already to create a crowdfunded platform without a traditional board of directors.

Since then, a number of protocols instantiated on distributed ledgers have de facto-created DAOs. Whenever there is a system for on-chain voting for decisions, arguably, this is already a form of DAO.

With the release of better-performing infrastructures and the development of on-chain services, the governance for distributed applications in itself calls for better-distributed governance of the protocols. Hence DAOs should be the natural next step for DApps.

## DAO usage, potential, and expectation

DAOs shall serve to make group decisions about decentralized protocols/applications. Power sharing and decision-making are already not easy in the real world, so it shall not be expected that it will be easy to implement on-chain.

To start with, one differentiator can be clearly seen between DAOs and paper organizations. With DAOs, code is implemented with no recourse against it other than to quit. Hence, it should be expected to be more strict (potentially hard-to-fix issues) and less prone to hidden manipulations by directors. When "code is law," as long as the program is well designed and well developed, cheating should be prevented and corruption avoided.

The DAO's political life still needs to happen, and channels need to be provided specifically for this; classic human interactions will no doubt replicate, but in DAOs, mechanisms for influencing and clientelism can be more easily codified, making the frontier with corruption clearer.

A lot of challenges stand in front of DAOs development and adoption. For instance:

- NDecentralized governance is tricky, especially in attempts to provide one-person-one-vote schemes or at least to balance plutocratic one-token-one-vote systems.
- To contribute to solving some of the above, performing on-chain identity management is needed. Proposals are being developed but still lack traction.
- In turn, with identity management, advanced cryptography such as Zero Knowledge Proof, Trusted Execution Environment or Multi-Party Computation (ZKP, TEE, MPC) is needed to keep privacy/confidentiality as appropriate.
- As DAOs mature, industry-wide parametrized standards should emerge to make launching these projects easy and effortless. This will help drive mass adoption of the technology in a secure and reliable manner.
- It requires a sufficiently large base of qualified stakeholders to work as intended.

## Brief history of DAOs

For an organization that claims to be autonomous and decentralized, the regulatory question is eminently interesting.

The whole complexity of the topic cannot be treated here, but looking at the extreme end of the spectrum. The situation is unprecedented for purely on-chain, permissionless DAOs whose instantiators do not even claim their identity. Such organizations arguably do not depend on any jurisdiction. As long as the infrastructure that they run on is permissionless, and their stakeholders are free to access it, they will, in effect, be out of reach from regulators.

Given that one side of DAOs will at some point be about profit sharing of some distributed application services, the "problem" becomes obvious: being a part of such a DAO generates an income that is taxable on individuals – not to mention questions of financial flux controls linked to anti-money laundering laws across the planet; nor investors protection regulations.

In this sense, DAOs are a door open to the unknown. No matter what, they already exist and will thrive; legacy human societies will have to handle them in one way or another. While some DAOs may not depend on any current jurisdiction, individuals still very much do. Hence one of the key challenges is how individuals will be asked to report their digital assets.

## DAOs - Conclusion

To this day, DAOs have suffered from their relative complexity, the need for a wider public of participants, as well as limitation of the underlying infrastructures and sound decentralized governance standards.

At the point of distributed application development, there is an evident need for on-chain governance. It is all the more important that profit sharing will come into question. For truly decentralized applications, this equates to putting decision-making processes in place in the form of smart contracted logic, resulting in an effective DAO.

This level of distributed applications development can be considered advanced: technical and adoption challenges remain, but DAOs are the natural development format for distributed businesses and associations. Their advantages in transparency, clarity of processes, and certainty of realization further advocate for their generalization in the future.

If good enough DAO models are generalized, people may be ready to “believe in code rather than believe in people,” and the value proposition of algorithmic decision-making management will gain traction. DAOs open a field of possibilities at the same time as a real challenge for financial regulatory control.

Due to their nature, DAOs will, in general, not have a classical headquarter and company registration, nor will they be attributable to a given jurisdiction: for example, in the Crypto Valley Top 50 list, no DAO is to be found.

# FAST, SCALABLE, AND INTELLIGENT INFRASTRUCTURE IS FINALLY HERE FOR WEB3

With the steady expansion of Web3 applications, there is a paradigm shift underway at the infrastructure layer. In short, applications' needs and expectations have evolved from primitive (i.e. basic connectivity) to sophisticated (i.e. elastic and intelligent). As a result, there is a new breed of Web3 infrastructure company taking hold - one that promises enterprise-grade speed, scale, and resiliency.

## Say what you will; superior infrastructure matters.

In the Web3 context, this concept is quickly taking hold, as applications crave a competitive edge and users expect seamless experiences.

In DeFi, traders or asset managers need access to fast and reliable node and staking infrastructure for a wide range of networks, not just a few of the largest. They also need infrastructure that is elastic, as fast-changing requirements while processing large numbers of transactions in multiple regions simultaneously creates unacceptable latency, costly downtime, and lost opportunities.

While some firms still run infrastructure in-house, the increasing number and complexity of networks will require them to utilize compliant, enterprise-grade infrastructure platforms.

## Next-generation Web3 infrastructure delivers...

- Superior speed: fast read and write capabilities, including access to the closest nodes in relevant regions of the world.
- Enterprise scale: elastic infrastructure that ramps up and down based on demand and throughput, negating the need for rate limiting and eliminating surprise costs.
- Global resilience: Multi-region deployments, facilitating fail-over mechanisms and self-healing for redundancy.

## Business value through superior infrastructure

Validation Cloud's mission is to connect organizations to Web3 through fast, scalable, and intelligent infrastructure. Validation Cloud's blockchain acceleration platform Javelin delivers the infrastructure that traditional enterprises require, as well as advantages to the Web3 applications of today.

Validation Cloud has architected Javelin, a solution for systemized delivery of infrastructure. This allows support for new networks in just two weeks. For custodians and asset managers, this time to market is a game-changer. Equally impressive, high-speed access and higher throughput have been validated to be up to 10x more performant than the market.

## Benefits for partners and customers

Validation Cloud's proprietary, global infrastructure unlocks alpha for DeFi traders in every blockchain network.

Asset managers benefit from the resilient infrastructure, reducing costly downtime and customer frustration with legacy infrastructure providers.

Javelin's transactional edge extends to the metaverse, where blockchain gamers can exploit powerful APIs to leave their competitors behind in the mempool.

The next billion users will be brought into Web3 by traditional enterprises, and those enterprises, as well as decentralized applications, will require compliant enterprise-grade infrastructure.

**Alex Altman**
COO & Founder,
Validation Cloud

**Andrew McFarlane**
CTO & Founder,
Validation Cloud

# 03

# VISUALIZATION OF BLOCKCHAIN INDUSTRY IN CRYPTO VALLEY

# Crypto Valley Top 50 Companies Per Sector

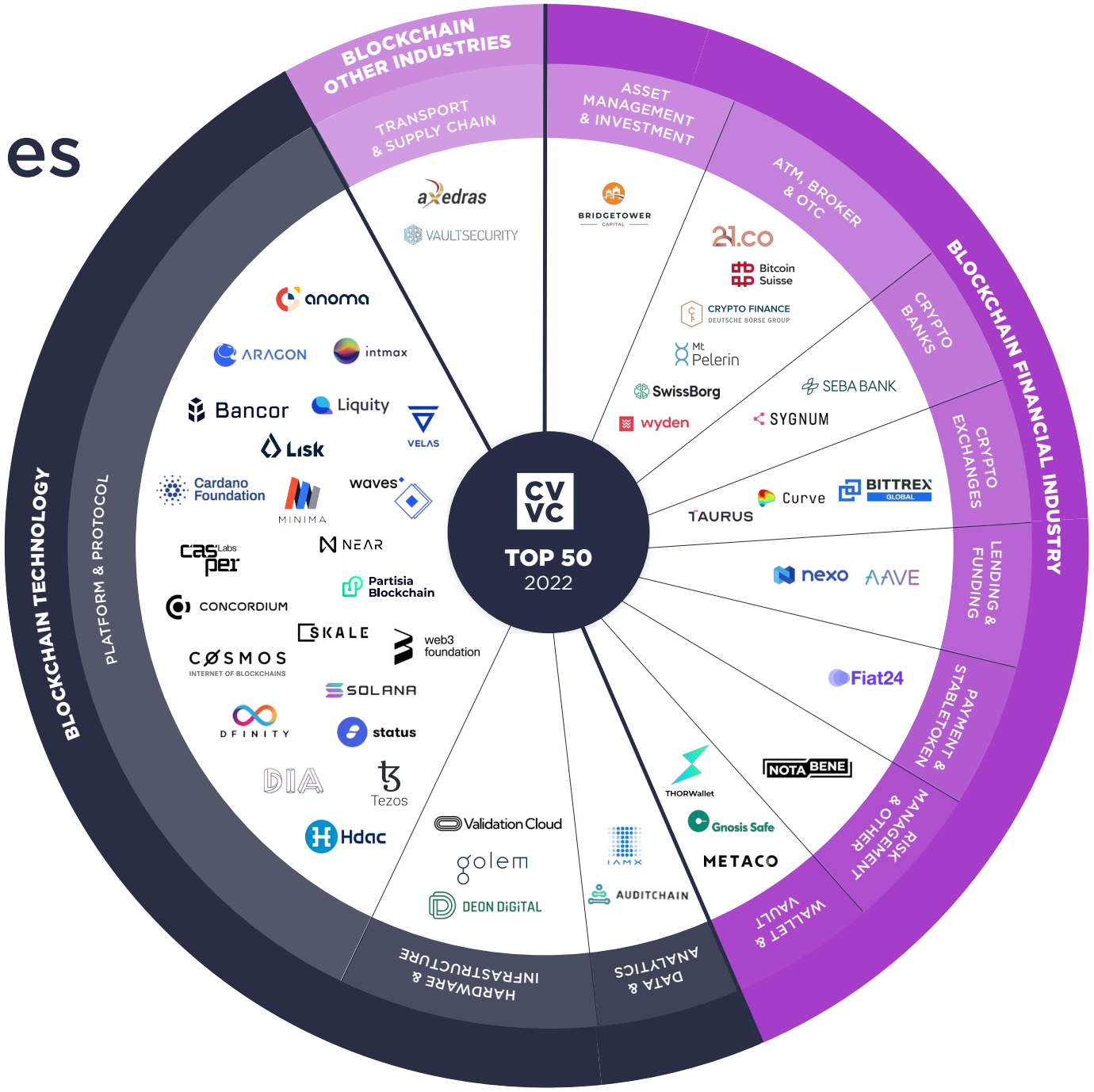
The CV VC Top 50 Report 2022 lists the core Blockchain Ventures in Switzerland and Liechtenstein. Key selection criteria: Funding, valuation, and employees in Switzerland and Liechtenstein.

## TOP 50 PLATFORMS AND COMPANIES

| | |
|---|---|
| **26** Blockchain Platforms | **24** Blockchain Companies |
| **US$ 175.6B** Marketcap of Blockchain Platforms | **US$ 9.7B** Equity Valuation of Companies |
| **7** Blockchain Platform Unicorns | **2** Companies Unicorns |

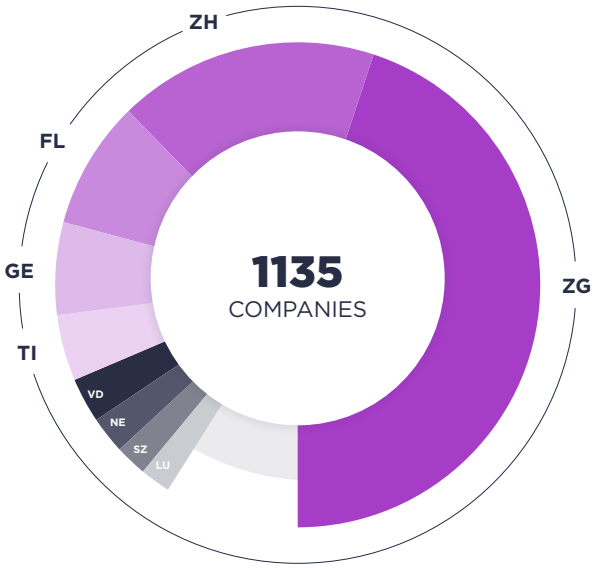
## CRYPTO VALLEY TOTAL

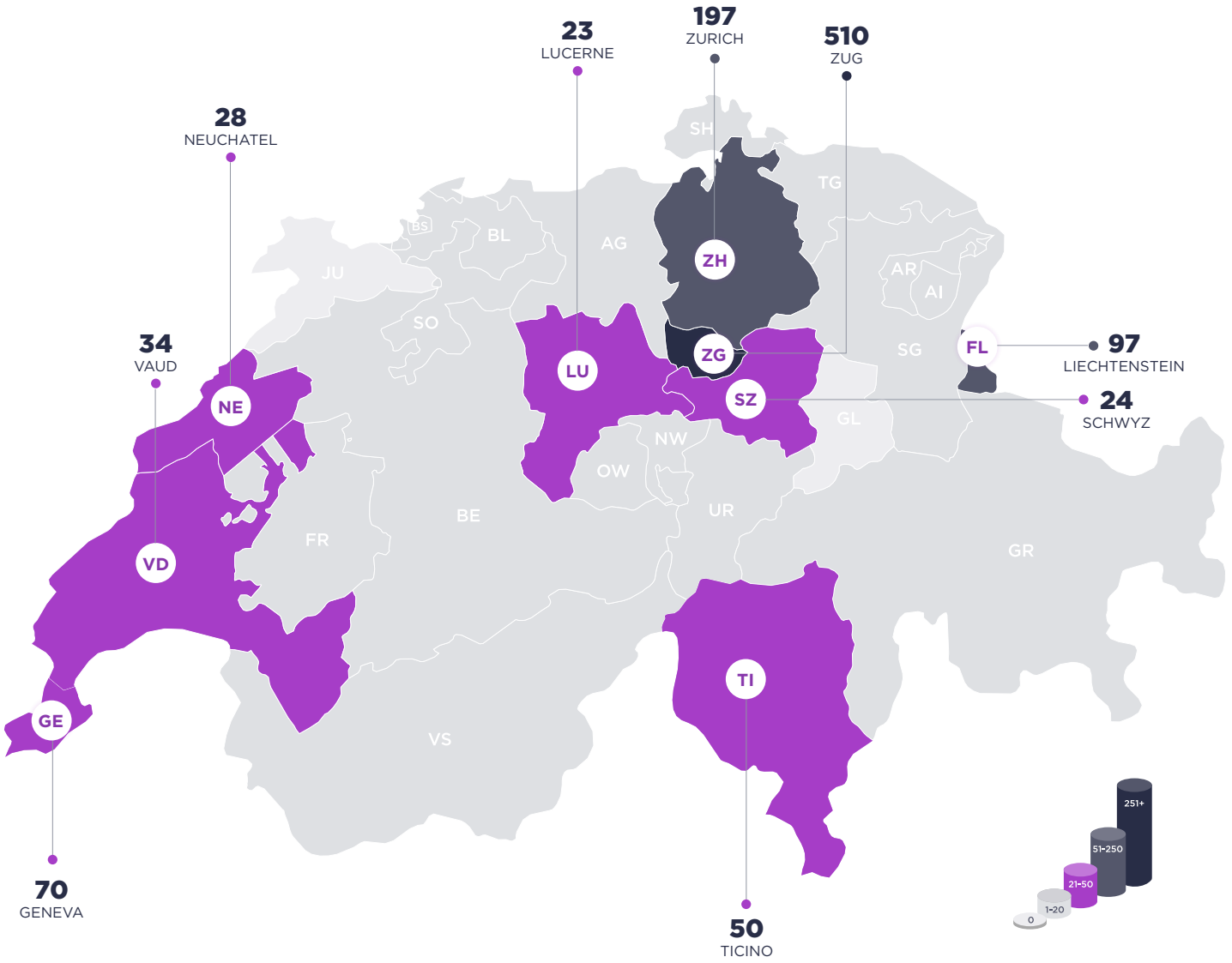
| | |
|---|---|
| **1135** Blockchain Companies | **5766** Employees of Blockchain Companies |



# Crypto Valley Companies by Region

Crypto Valley, which includes both Switzerland and Liechtenstein, is home to 1,135 blockchain/cryptocurrency companies. CV VC research shows nine crypto hotspots in Crypto Valley: Zug, Zurich, Liechtenstein, Geneva, Ticino, Vaud, Neuchatel, Schwyz and Lucerne. Zug continues to be the heart of Crypto Valley, as almost half of all companies make Zug their home (510). The Canton of Zurich counts 197 companies, Geneva counts 70, Ticino counts 50, Vaud counts 34, Neuchâtel counts 28, Schwyz counts 24 and Lucerne counts 23. The Principality of Liechtenstein counts 97 companies.




*Number of startups per canton. The darker the color, the more companies are registered in that canton. Only cantons with 20+ registered companies are named. Example: Zug has 510 companies so it is colored in the darkest shade and indicated with ZG.*

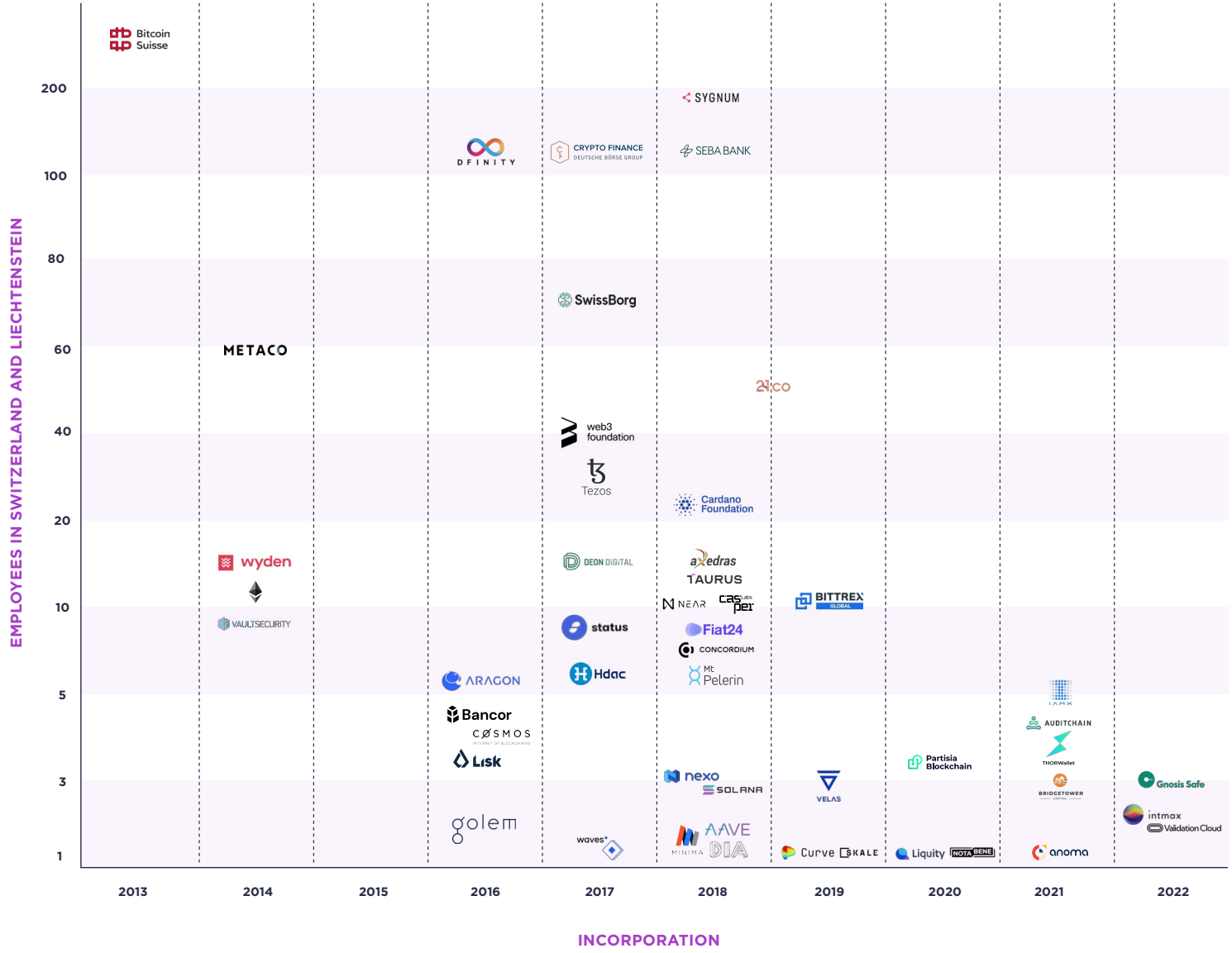
# Top 50 Companies Employment Levels

The Crypto Valley blockchain and cryptocurrency ecosystem employs over 5,766 professionals in Switzerland and Liechtenstein.

## CRYPTO VALLEY EMPLOYMENT

| 1248 | 5766 |
|---|---|
| Top 50 # of Employees | All Crypto Valley # of Employees |

*Incorporation vs. employees. The X axis displays the incorporation date of Crypto Valley's Top 50 companies, while the Y axis displays the number of people that each company employs.*



# Valuation and Funding

The composition of the Top 50 companies changes slightly each reporting period, which may result in changes to the total funding amount.

## CRYPTO VALLEY'S TOP 50 VALUATION AND FUNDING

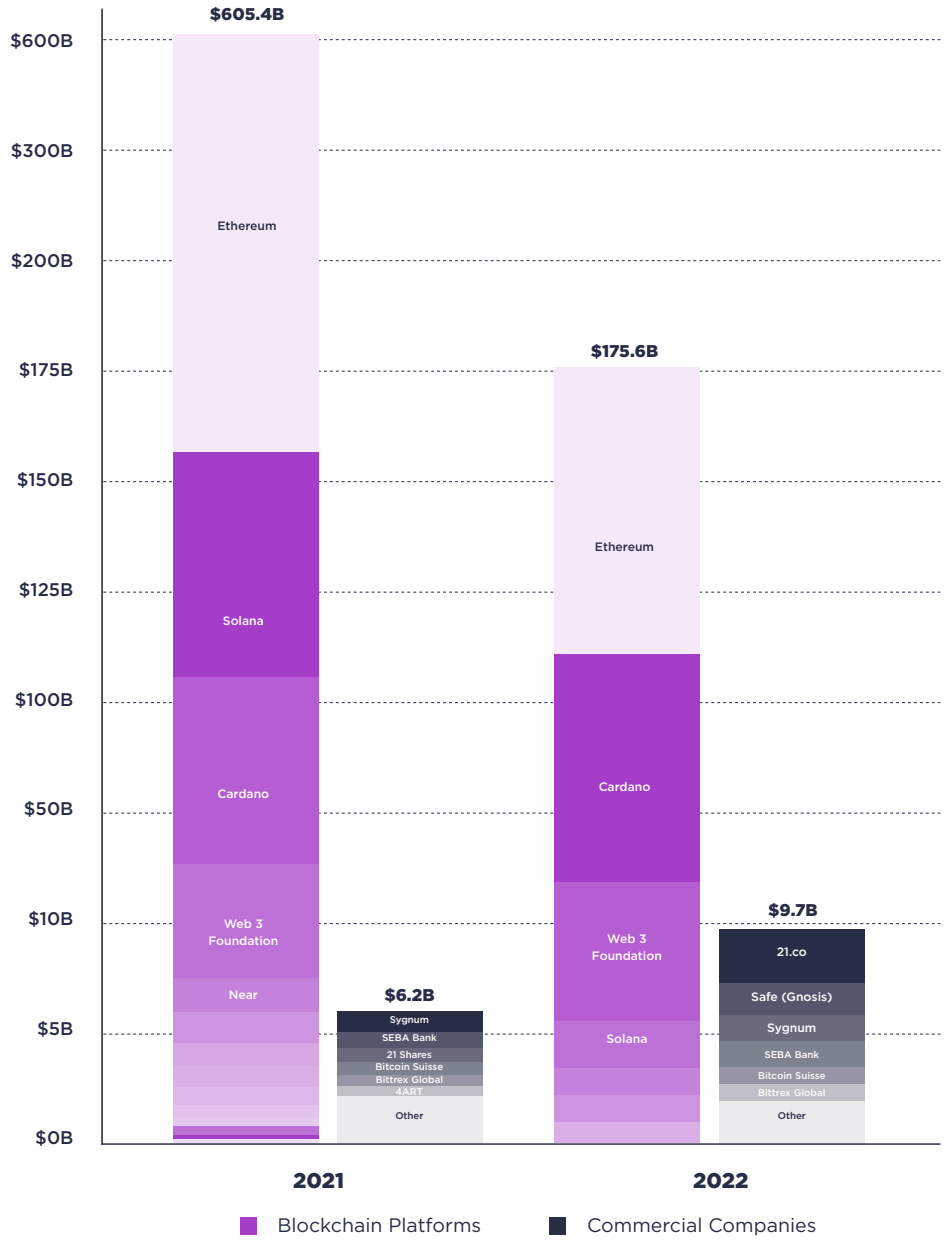
| 2020 | 2021 | 2022 |
|---|---|---|
| **US$ 108.4B** Total Valuation | **US$ 611.8B** Total Valuation | **US$ 185.4B** Total Valuation |
| **US$ 22.8B** Valuation W/O Ethereum | **US$ 173.6B** Valuation W/O Ethereum | **US$ 36.5B** Valuation W/O Ethereum |
| **US$ 2.55B** Funding | **US$ 3.1B** Funding | **US$ 3.2B** Funding |

Crypto Valley counts a total of 9 Unicorns (Companies valued at >US$ 1B).
2 are commercial companies and 7 are blockchain platforms.

### UNICORNS

| BLOCKCHAIN PLATFORMS | | COMMERCIAL COMPANIES | |
|---|---|---|---|
| Ethereum | $148.9B | 21.co | $2B |
| Cardano | $8.8B | Safe (Gnosis) | $1.2B |
| Web3 Foundation | $5.2B | | |
| Solana | $4.4B | | |
| Cosmos | $2.6B | | |
| Near | $1.1B | | |
| Dfinity | $1B | | |

### CRYPTO VALLEY'S TOP 50 VALUATION AND FUNDING




**The Y axis has been skewed to better represent the data*

# 04

# CRYPTO VALLEY TOP 50 ENTITIES LISTED BY SECTOR

# Methodology and Selection for the Crypto Valley Top 50

In this year's Top 50 report, the choice has been made to separate entities into consistent groups: blockchain platforms on the one hand and commercial companies on the other hand.

Blockchain platforms are distributed ledgers relying on a consensus mechanism involving a native token. Their presence in the Crypto Valley is because their organizations are registered in Switzerland/Liechtenstein. For this category, the market capitalization of platform tokens as of 31st Dec 2022 is put forward.

Commercial companies are founded in a classical fashion with a regular capital structure and not (or not yet) funded by tokens. As such, it is possible to calculate or estimate their equity valuation (either by way of last financing round, information from the company, and/or current estimate).

The separation of the two categories is important because of the very nature of the two types of entities, and, importantly, their different valuation logic.

## Basic Criteria

Business activity focus: Blockchain,
>1 Employees in CH/LI, Ecosystem/Community Relevance

+

| FUNDING | VALUATION | EMPLOYEES |
|---|---|---|
| • Combined traditional VC investment and token sales.<br><br>• In case of ICO, USD amount equivalent to total amount raised at crypto exchange rates at time of ICO closing. | • Valuation based on funding, traditional valuation or current token market cap.<br><br>If there is no data:<br>1. Valuation equals funding (= based on most recent funding, no market valuation yet)<br><br>2. Is an estimate according to the following categorization:<br><br>S = 10M<br>M= 25M<br>L = 50M<br>XL = 100M<br>XXL - 500M | • FTE physically based in CH/LI<br><br>• 3 advisors = 1 FTE<br><br>• Estimate if no data available |

# Blockchain Technology

- DATA & ANALYTICS
- HARDWARE & INFRASTRUCTURE
- PLATFORM & PROTOCOL

Source: Corporate Contact (CC); CrunchBase (CB); Desk Research/Press (DR); Coinmarketcap (CMC); LinkedIN (Li), Estimate (2), No information (N/A)

## Anoma

anoma

Anoma is a sovereign, proof-of-stake blockchain protocol that enables private, asset-agnostic cash and private bartering among any number of parties. Anoma is part of a growing global effort to impede non-consensual usage of data by third parties, prevent nation-states from weaponizing the financial system, and empower humankind to solve existentially-threatening collective action problems that transcend national borders.

Token Ticker: N/A

Sub-Category: Platform & Protocol

$36,000,000 CC FUNDING

$300,000,000 CC VALUATION

1 LI EMPLOYEES CH

## Aragon

ARAGON

Create value without borders or intermediaries. Aragon is being built because so that decen-tralized organizations can solve the world's worst problems. Aragon is a project that aims to disintermediate the creation and mainte-nance of organizational structures by using blockchain technology. The company wants to empower people across the world to easily and securely manage their organizations. Aragon provides the tools for anyone to become an entrepreneur and run their own organization, to take control of their own lives.

Token Ticker: ANT

Sub-Category: Platform & Protocol

$190,000,000 CB FUNDING

$88,803,038 CMC MARKETCAP

6 LI EMPLOYEES CH

## Auditchain Labs AG

AUDITCHAIN

Auditchain is a decentralized accounting, reporting, audit, and analysis protocol that automates and provides proof of assurance on the world's financial and business information. It's the world's first Web3 financial disclosure infrastructure for digital asset and enterprise assurance and disclosure. The AuditChain Protocol incentivizes the creation and consumption of Process Control NFTs that automate business and intelligence automation.

Token Ticker: N/A

Sub-Category: Data & Analytics

$4,500,000 CC FUNDING

$50,000,000 CC VALUATION

4 CC EMPLOYEES CH

## Bancor

Bancor

Bancor introduced the first-ever decentralized exchange (DEX) based on automated market makers (AMMs). The protocol offers users safe and simple access to DeFi yields while enabling algorithmic, decentralized trading for integrated tokens. Bancor is the only decentralized trading protocol that allows depositors to earn money with single-token exposure and zero risk of impermanent loss.

Token Ticker: BNT

Sub-Category: Platform & Protocol

$152,300,000 CB FUNDING

$58,614,103 CMC MARKETCAP

4 LI EMPLOYEES CH

## Cardano

Cardano Foundation

Cardano is a decentralised public blockchain and cryptocurrency project and is fully open source. Cardano is developing a smart contract platform which seeks to deliver more advanced features than any protocol previously developed.

Token Ticker: ADA

Sub-Category: Platform & Protocol

$62,200,000 CC FUNDING

$8,766,664,637 CMC MARKETCAP

22 CC EMPLOYEES CH

## CasperLabs

CasperLabs

The Casper Network is a fully decentralized (permis-sionless), scalable, and highly secure Proof-of-Stake layer 1 blockchain. Casper has solved the layer 1 trilemma; it is secure, fully decentralized, and scalable/fast. Powered by Highway, an inno-vative, correct-by-construction (CBC) Casper-ba-sed Proof-of-Stake consensus protocol, Casper is leveraging popular workflows, innovative deve-loper tools and multiple programming langua-ges. Casper makes blockchain services easier to use, more upgradable and more predictable, thus removing barriers to mainstream adoption.

Token Ticker: CSPR

Sub-Category: Platform & Protocol

$40,000,000 CC FUNDING

$276,582,040 CMC MARKETCAP

10 LI EMPLOYEES CH

## Concordium

When launched in 2021, the Concordium blockchain will be a Level1, Proof-of-stake, regulatorycompliant, enterprise grade blockchain with verified identity of users built-in at the protocol level and with application of zero-knowledge proofs. Technological innovations will enhance its performance and allow the blockchain to be fast without compromising security, be scalable, offer interoperability and it's partial synchro-nicity adjust to the speed of the internet and ensure that Concordium won´t break under any circumstances.

**Token Ticker:** GTU
**Sub-Category:** Platform & Protocol

**$45,000,000 DR** FUNDING
**$41,209,693 CMC** MARKETCAP
**7 LI** EMPLOYEES CH

## Cosmos

Interchain Foundation, a Swiss non-profit, which is responsible for co-ordinating fundraising and allocating funds to get the network off the ground. The foundation will suggest a distribution of Atoms according to the results of the fundraiser. Users will ultimately decide the distribution for them-selves when they run the software. The Interchain Foundation will suggest that 5% of the Atoms go to its initial donors, 10% go to the Interchain Foundation, 10% go to the company developing most of the software, and the remaining 75% to be distributed according to the results of the private and publicfundraisers.

**Token Ticker:** ATOM
**Sub-Category:** Platform & Protocol

**$17,000,000 CB** FUNDING
**$2,570,556,199 CMC** MARKETCAP
**4 LI** EMPLOYEES CH

## Deon Digital

Deon Digital leverages more than 10 years of academic research, a world-class team, and the power of distributed ledger technology to enable enterprises to turn contracts into smart legal contracts that are stored, analyzed, executed, and monitored securely, privately, and automatically beyond organizational boundaries. This dramatically reduces the amount of time that is spent reconciling data.

**Token Ticker:** N/A
**Sub-Category:** Hardware & Infrastructure

**$16,000,000 CC** FUNDING
**$85,000,000 CC** VALUATION
**15 CC** EMPLOYEES CH

## Dfinity Foundation

The DFINITY Foundation is a not-for-profit organi-zation based in Zurich, Switzerland, that oversees research centers in Palo Alto, San Francisco, Tokyo, and Zurich. Our mission is to build, promote, and maintain the Internet Computer and by doing so, improve the world. The Internet Computer extends the functionality of the internet from connecting billions of people to also providing millions of developers and entrepreneurs with a public compute platform creating a revolutionary new way to build software, DeFi and open internet services. In turn, this generational shift in computing aims to return the internet back to its free and open roots.

**Token Ticker:** DFN
**Sub-Category:** Platform & Protocol

**$166,900,000 CB** FUNDING
**$1,018,215,625 CMC** MARKETCAP
**110 CC** EMPLOYEES CH

## DIA

DIA (Decentralised Information Asset) is an open-source, financial information platform that utilizes crypto-economic incentives to source and validate data. Market actors can supply, share, and use financial and digital asset data. DIA's mission is to democratize financial data, similar to what Wikipedia has done in the broader information space. DIA data sources and methodologies are transparent and publicly accessible to everyone.

**Token Ticker:** DIA
**Sub-Category:** Platform & Protocol

**$15,000,000 CB** FUNDING
**$25,304,767 CMC** MARKETCAP
**1 LI** EMPLOYEES CH

## Ethereum

Ethereum is a decentralized platform that runs smart contracts: applications that run exactly as programmed without any possibility of downtime, censorship, fraud or third-party interference. These apps run on a custom built blockchain, an enormously powerful shared global infrastructure that can move value around and represent the ownership of property. This enables developers to create markets, store registries of debts. or promises, move funds in accordance with instructions given long in the past (like a will or a futures contract) and many other things that have not been invented yet, all without a middleman or counterparty risk.

**Token Ticker:** ETH
**Sub-Category:** Platform & Protocol

**$18,400,000 DR** FUNDING
**$148,901,733,979 CMC** MARKETCAP
**11 2** EMPLOYEES CH

## Golem

Golem is a global, open source, decentralized supercomputer that anyone can access. It is made up of the combined power of users machines, from PCs to entire data centers. Golem creates a decentralized sharing economy of computing power and supplies software developers with a flexible, reliable and cheap source of computing power.

**Token Ticker:** GLM
**Sub-Category:** Hardware & Infrastructure

**$17,200,000 CB** FUNDING
**$196,397,042 CMC** MARKETCAP
**2 LI** EMPLOYEES CH

## HDAC

Headquartered in Zug, Switzerland, Hdac Technology AG is a blockchain technology company that aims to be a digital currency and asset hub that provides a platform where fiat currencies around the world can be securely issued and enables businesses to interoperate with each other. Rizon Blockchain has strong network background and is capable of boosting the inflow of the ecosystem participants and the diversification of business.

**Token Ticker:** N/A
**Sub-Category:** Platform & Protocol

**$258,000,000 CC** FUNDING
**$111,007,702 CC** VALUATION
**6 CC** EMPLOYEES CH

IAMX AG

IAMX is a token-based self-sovereign identity (SSI) and authentication system, enabling 1Click-Fulfillment transactions that are legally binding on the state/national level. Their vision is to empower everyone on Earth to realize their human right to have an identity and their mission is to protect the human right of every individual to hold, control, and own their personal identity.

Token Ticker: N/A

Sub-Category: Data & Analytics

$3,000,000 CC FUNDING

$65,000,000 CC VALUATION

5 CC EMPLOYEES CH

Intmax

Intmax is a Rollup project that will evolve Ethereum into something that can be used by online citizens worldwide as infrastructure principally for payments, but also for other forms of internet-native ownership through NFTs and community-governed tokens. Its design is based on algorithms aimed at achieving scalability for billions of users, which is currently extremely challenging with traditional zkRollups.

Token Ticker: N/A

Sub-Category: Platform & Protocol

$5,000,000 CC FUNDING

$50,000,000 CC VALUATION

2 CC EMPLOYEES CH

Liquity

Liquity is a decentralized borrowing protocol that allows you to draw 0% interest loans against Ether used as collateral. Loans are paid out in LUSD - a USD pegged stablecoin, and need to maintain a minimum collateral ratio of only 110%. Liquity creates a more capital-efficient and user-friendly way to borrow stablecoins. Furthermore, Liquity is governance-free, ensuring that the protocol remains decentralized.

Token Ticker: LQTY

Sub-Category: Platform & Protocol

$8,400,000 CB FUNDING

$53,108,194 CMC MARKETCAP

1 LI EMPLOYEES CH

Lisk

Develop and publish blockchain applications with your own sidechains on the open-source Lisk Platform. Promotion of new technology developments and applications, in particular promotion and maintenance of new open decen-tralized software architectures. In the foreground - but not exclusively - is the promotion and development of the so-called Lisk protocol and the corresponding technology as well as the promotion and support of applications using the Lisk protocol.

Token Ticker: LSK

Sub-Category: Platform & Protocol

$5,800,000 CC FUNDING

$102,014,890 CMC MARKETCAP

4 CC EMPLOYEES CH

Minima

Minima is a secure, scalable, and completely decentralized public blockchain, that can run completely on a mobile or IoT device without any third parties - no external miners, validators, or producers. Minima will launch its mainnet in 2022 and has the ambition to have millions of nodes, creating a decentralized web architecture for the future.

Token Ticker: N/A

Sub-Category: Platform & Protocol

$14,000,000 CC FUNDING

$300,000,000 CC VALUATION

1 CC EMPLOYEES CH

Near Protocol

NEAR Protocol is a scalable blockchain designed to provide the performance and user experience necessary to bridge the gap to mainstream adoption of decentralized applications. Unlike other next-generation blockchains, this network has been built from the ground up to be the easiest in the world for both developers and their end-users while still providing the scalability necessary to serve those users.

Token Ticker: NEAR

Sub-Category: Platform & Protocol

$50,000,000 CB FUNDING

$1,114,341,495 CMC MARKETCAP

10 LI EMPLOYEES CH

Partisia Blockchain

Partisia Blockchain is the world's most advanced zero-knowledge blockchain. Its WEB 3.0 public blockchain is built for trust, transparency, privacy, and speed of light finalization. Partisia Blockchain is a unique combination of a high-performance blockchain that functions as a bedrock for efficient, scalable, and robust orchestration of MPC. This combination of blockchain and MPC technologies provide an optimal foundation for native privacy-preserving applications.

Token Ticker: MPC

Sub-Category: Platform & Protocol

$42,500,000 DR FUNDING

$300,000,000 2 VALUATION

4 LI EMPLOYEES CH

SKALE

SKALE is built to bring the power of Ethereum to billions of users. It is a 100% decentralized network that will bring Web3, NFTs, and DeFi to users through a world of interconnected, limitless SKALE chains. Developers use SKALE's highly configurable platform to run smart contracts 100% on SKALE chains without centralized dependencies. Plus, SKALE's unique pooled security model with ~$1B staked enables developers to deliver a high-speed, seamless user experience without gas fees or latency.

Token Ticker: SKL

Sub-Category: Platform & Protocol

$22,100,000 CC FUNDING

$86,056,009 CMC MARKETCAP

1 CC EMPLOYEES CH

Solana

Solana is a highly functional open source project that banks on blockchain technology's permis-sionless nature to provide decentralized finance (DeFi) solutions. While the idea and initial work on the project began in 2017, Solana was officially launched in March 2020 by the Solana Foundation with headquarters in Geneva, Switzerland. The Solana protocol is designed to facilitate decentralized app (DApp) creation.

Token Ticker: SOL

Sub-Category: Platform & Protocol

$335,800,000 CB FUNDING

$4,444,979,475 CMC MARKETCAP

3 LI EMPLOYEES CH

Status

The Status Network builds decentralized technologies ranging from protocol-level infrastructure to consumer applications, forming an open-source, peer-to-peer technology stack. The open set of projects contains products, tooling, and infrastructure to enable local societies and economies to thrive, allow others to build new products and services suited to their specific needs, and help local communities to take back sovereignty and remove the reliance on third parties.

Token Ticker: SNT

Sub-Category: Platform & Protocol

$107,664,907 CB FUNDING

$74,300,370 CMC MARKETCAP

8 LI EMPLOYEES CH

Tezos

Tezos is a self-upgradable and energy-efficient Proof of Stake blockchain with a proven record of security and scalability. In 2021, Tezos recorded over 50 million transactions with a carbon footprint of just 17 individuals. Seamlessly adopting innovations without disruption, Tezos is designed to evolve and built to empower. The Tezos Foundation is located in the Crypto Valley.

Token Ticker: XTZ

Sub-Category: Platform & Protocol

$232,000,000 CC FUNDING

$736,780,745 CMC MARKETCAP

28 CC EMPLOYEES CH

Validation Cloud AG

Validation Clooud is the leading enterprise-grade Web3 infrastructure company, offering node- and staking-as-a-service. Our technology platform, Javelin, delivers superior read/write & propagation speeds on blockchains, infinite scalability, and global resilience; solving problems for networks, DApp developers, and validators.

Token Ticker: N/A

Sub-Category: Hardware & Infrasturcture

N/A FUNDING

$45,000,000 CC VALUATION

2 CC EMPLOYEES CH

Velas

Velas is the world's fastest EVM compatible chain. Velas is a full hybrid EVM/eBPF chain of Solana and Ethereum, that inherited the best from both: security, scalability, high performance, 1.2-sec finality, extremely low fees, and Solidity support.

Token Ticker: VLX

Sub-Category: Platform & Protocol

$10,000,000 CC FUNDING

$52,895,997 CMC MARKETCAP

3 LI EMPLOYEES CH

Waves Platform

Waves creates the economics of free, perfect and instant. The Waves Platform is a global public blockchain platform, founded in 2016. Waves Platform's mission is to reinvent the DNA of entrepreneurship around the world by providing a shared infrastructure, offering easy-to-use, highly functional tools to make blockchain available to every person or orga-nisation that can benefit from it.

Token Ticker: WAVES

Sub-Category: Platform & Protocol

$142,000,000 CB FUNDING

$166,567,095 CMC MARKETCAP

1 LI EMPLOYEES CH

Web3 Foundation

Our mission is to nurture cutting-edge applications for decentralized web software protocols. Our passion is delivering Web 3.0, a decentralized and fair internet where users control their own data, identity, and destiny. We support Web 3.0 teams and open-source projects through funding, advocacy, research, and collaborations. Our flagship protocols are Polkadot and Kusama.

Token Ticker: DOT

Sub-Category: Platform & Protocol

$293,700,000 CC FUNDING

$5,204,986,451 CMC MARKETCAP

40 CC EMPLOYEES CH

# Blockchain Financial Industry

- ASSET MANAGEMENT & INVESTMENT
- ATM, BROKER & OTC
- CRYPTO BANKS
- CRYPTO EXCHANGES
- LENDING & FUNDING
- PAYMENT & STABLETOKEN
- WALLET & VAULT

Source: Corporate Contact (CC); CrunchBase (CB); Desk Research/Press (DR); Coinmarketcap (CMC); LinkedIN (Li), Estimate (2), No information (N/A)

21.co

21.co is the world's leader in providing access to crypto through easy-to-use products. 21.co is the parent company of 21Shares, the world's largest issuer of cryptocurrency ETPs – which is powered by Onyx, a proprietary technology platform used to issue and operate cryptocurrency ETPs for 21Shares and third parties – in addition to Amun, a token provider focused on making the DeFi world more accessible. The company was founded in 2018 by Hany Rashwan and Ophelia Snyder and is registered in Zug, with offices in Zurich and New York.

Token Ticker: N/A

Sub-Category: ATM, Broker & OTC

$25,000,000 CC FUNDING

$2,000,000,000 CC VALUATION

50 CC EMPLOYEES CH

AAVE

Aave (fun fact: the name is taken from the Finnish word for "ghost") is a decentralised, open-source, and non-custodial liquidity protocol on Ethereum. Depositors earn interest by providing liquidity to lending pools, while borrowers can obtain loans by tapping into these pools with variable and stable interest rate options. Aave Protocol is unique in that it tokenizes deposits as aTokens, which accrue interest in real time. It also features access to Flash Loans and Credit Delegation as unco-llateralised loan options.

Token Ticker: AAVE

Sub-Category: Lending & Funding

$49,000,000 CB FUNDING

$791,870,134 CMC MARKETCAP

1 LI EMPLOYEES CH

Bitcoin Suisse

Bitcoin Suisse is the Swiss crypto-finance and technology pioneer and market leader. Bitcoin Suisse has helped to shape the crypto and blockchain ecosystem in Switzerland and has been a driving force in the development of the Crypto Valley. As a regulated Swiss financial intermediary, Bitcoin Suisse offers prime brokerage, trading, custody, lending, staking, and other crypto-financial services for private and institutional clients.

Token Ticker: N/A

Sub-Category: ATM, Broker & OTC

$50,500,000 CC FUNDING

$500,000,000 CC VALUATION

240 CC EMPLOYEES CH

Bittrex Global

Bittrex Global provides a proven and secure platform for its customers to access the opportunities of digital asset trading. Built on Bittrex's cutting-edge technology, Bittrex Global provides an institutional grade experience for professional and novice customers alike.

Token Ticker: N/A

Sub-Category: Crypto Exchanges

$5,000,000 2 FUNDING

$500,000,000 2 VALUATION

11 LI EMPLOYEES CH

Bittrex Global

BridgeTower Capital has developed a global marketplace to uniquely bring products that are constructed with compliant regulatory adherence to enable an institutional gateway to Staked Securities, NFTs, Custom Turnkey offerings, Financial products, and Web 3.0 entities. BridgeTower operates more than 7,000 of its own staking nodes and owns servers utilizing 100 percent renewable energy.

Token Ticker: N/A

Sub-Category: Asset Managment & Investmnt

N/A FUNDING

$250,000,000 CC VALUATION

3 CC EMPLOYEES CH

Crypto Finance

The Crypto Finance Group provides institutional and professional investors products and services with a level of quality, reliability, and security that is unique in the digital asset space today. The group provides asset management, with the first regulated asset manager for crypto asset funds authorised by FINMA; brokerage services for 24/7 crypto asset trading; and crypto asset storage infrastructure and tokenisation solutions. Since its founding in 2017, the group has been recognised several times, including as a Crypto Valley Top 50 blockchain company, Top 100 Swiss Start-up, and 2019 Swiss FinTech Award winner.

Token Ticker: N/A

Sub-Category: ATM, Broker & OTC

$36,100,000 DR FUNDING

$200,000,000 DR VALUATION

113 CC EMPLOYEES CH

curve.fi

Curve

Token Ticker: CRV

Sub-Category: Crypto Exchanges

Curve is an exchange liquidity pool on Ethereum (like Uniswap) designed for (1) extremely efficient stablecoin trading (2) low risk, supplemental fee income for liquidity providers, without an opportunity cost. Curve allows users to trade between DAI and USDC with a bespoke low slippage, low fee algorithm designed specifically for stablecoins and earn fees.

$2,500,000 [2] FUNDING

$282,231,830 [CMC] MARKETCAP

1 [LI] EMPLOYEES CH

Fiat 24

Fiat24

Token Ticker: N/A

Sub-Category: Payment & Stabletoken

SR Saphirstein AG is a Swiss financial institution directly regulated by FINMA. Fiat24 is a payment application developed by SR Saphirstein AG for its retail customers. Fiat24 attempts to use blockchain technology to change the way existing banks operate and thus increase efficiency.

$9,000,000 [CC] FUNDING

$130,000,000 [CC] VALUATION

9 [CC] EMPLOYEES CH

Metaco

METACO

Token Ticker: N/A

Sub-Category: Wallet & Vault

METACO is the leading provider of security-critical infrastructure enabling financial institutions to enter the digital asset ecosystem. The company is trusted by top banks, exchanges and infrastructure providers globally.

$20,000,000 [CC] FUNDING

$80,000,000 [CC] VALUATION

60 [CC] EMPLOYEES CH

Mt Pelerin

Mt Pelerin

Token Ticker: N/A

Sub-Category: ATM, Broker & OTC

Mt Pelerin is providing products and services bridging the crypto world with traditional finance. It was bootstrapped by its own community through equity crowdfunding that raised more than $2M in 2018. Since then, Mt Pelerin has become one of the leading actors in asset tokenization with its Bridge Protocol platform and provides unique crypto services through its mobile app Bridge Wallet. It is currently working on creating a tokenized full-reserve financial institution in Switzerland.

$2,150,000 [CC] FUNDING

$90,000,000 [CC] VALUATION

6 [CC] EMPLOYEES CH

Nexo

nexo

Token Ticker: NEXO

Sub-Category: Lending & Funding

Nexo is the world's leading regulated finan-cial institution for digital assets with $4 billion in assets under management. The company's mission is to maximize the value and utility of cryptocurrencies by offering tax-efficient Instant Crypto Credit Lines™, a high-yield Earn on Cryp-to & Fiat suite, and sophisticated trading and OTC capabilities, while providing the top-tier custodial insurance and military-grade secu-rity of the Nexo Wallet. Nexo has processed $5+ billion for 1,000,000+ users across more than 200 jurisdictions.

$52,500,000 [CB] FUNDING

$362,508,726 [CMC] MARKETCAP

3 [LI] EMPLOYEES CH

Notabene ID Gmbh

NOTABENE

Token Ticker: N/A

Sub-Category: Risk Management & Other

Notabene helps businesses comply with crypto regulations that are coming into effect now. They are the first platform to provide full compliance with the Travel Rule. Notabene's current offering consists of a unified API and dashboard helping compliance officers at exchanges manage risk for both Travel Rule and non-custodial transactions.

$12,700,000 [CC] FUNDING

$45,000,000 [CC] VALUATION

1 [CC] EMPLOYEES CH

Safe (gnosis)

Gnosis Safe

Token Ticker: N/A

Sub-Category: Wallet & Vault

Safe (Gnosis spin-off) is on a mission to unlock digital ownership for everyone in web3. Be it DAOs, enterprises, retail, or institutional users, everyone deserves robust infrastructure to protect and coordinate value. With Safe protocol's ecosystem and flagship web and mobile products, we continue to build a universal standard for the custody of assets, data, and identity for users to collaborate as more empowered owners.

$100,000,000 [CC] FUNDING

$1,250,000,000 [CC] VALUATION

3 [CC] EMPLOYEES CH

Seba Bank

SEBA BANK

Token Ticker: N/A

Sub-Category: Crypto Banks

SEBA Bank is a pioneer in the financial industry and is the only global smart bank providing a fully universal suite of regulated banking services in the emerging digital economy. In August 2019, SEBA Bank received a Swiss banking and securities dealers license, and in September 2021 the CISA license. The broad, vertically integrated spectrum of services combined with the highest security standards, make SEBA Bank's value proposition unique.

$245,600,000 [DR] FUNDING

$750,000,000 [DR] VALUATION

110 [CC] EMPLOYEES CH

SwissBorg

SwissBorg is democratizing wealth management by making it fun, fair, and community-centric. SwissBorg holds two licenses to provide Virtual Currency Exchange and Virtual Currency Wallets internationally. We believe that blockchain technology can empower everyone to control their wealth and that this is the next step towards a world of decentralized nations, where every individual is welcome and is fairly rewarded for their contributions.

**Token Ticker:** CHSB

**Sub-Category:** ATM, Broker & OTC

**$52,400,000** CB
FUNDING

**$214,297,392** CMC
MARKETCAP

**74** LI
EMPLOYEES CH

Sygnum Bank AG

Sygnum is the world's first digital asset bank, and a digital asset specialist with global reach. With Sygnum Bank AG's Swiss banking licence, as well as Sygnum Pte Ltd's capital markets services (CMS) licence in Singapore, Sygnum empowers institu-tional and private qualified investors, corporates, banks and other financial institutions to invest in the digital asset economy with complete trust.

**Token Ticker:** N/A

**Sub-Category:** Crypto Banks

**$182,000,000** CC
FUNDING

**$800,000,000** CC
VALUATION

**191** CC
EMPLOYEES CH

Taurus

Taurus is a technology company providing end-to-end digital asset infrastructure for financial insti-tutions. Multi-assets, multi-blockchains. EU market leader with more than 1 bank out of 2 running Taurus infrastructure. We offer a suite of applica-tions to manage the entire lifecycle of any digital assets (private assets, crypto assets and digital currencies) in one platform: issuance, tokenisa-tion, custody and blockchain communication. Easy to deploy or integrate: API-based, availa-ble on premise or SaaS. Future-proof solutions: our engineers are among the few teams in the world that master the full technology stack across software development, secure DevOps, crypto-graphy and blockchain technology.

**Token Ticker:** N/A

**Sub-Category:** Crypto Exchanges

**$10,900,000** CB
FUNDING

**$100,000,000** S
VALUATION

**14** LI
EMPLOYEES CH

ThorWallet

THORWallet DEX is a multi-chain non-custodial wallet that enables you to hold and swap native crypto assets across chains and earn passive income on them by providing liquidity using THORChain's protocol. At the same time, the app includes earn functionalities like liquidity pooling or cross-chain savings accounts. All non-custodial, pure DeFi.

**Token Ticker:** TGT

**Sub-Category:** Wallet & Vault

**$4,900,000** CC
FUNDING

**$5,714,452** CMC
MARKETCAP

**$98,000,000** CC
VALUATION

**4** CC
EMPLOYEES CH

Wyden

Wyden (previously AlgoTrader) is the global leader in institutional digital asset trading technology. By covering the entire trade lifecycle and supporting seamless custody, core banking and portfolio management system integration as well as full trade lifecycle automation, the Wyden platform streamlines digital assets trading. Wyden offers integrated infrastructure solutions that meet the highest institutional needs.

**Token Ticker:** N/A

**Sub-Category:** ATM, Broker & OTC

**$6,600,000** CB
FUNDING

**$50,000,000** 2
VALUATION

**14** LI
EMPLOYEES CH

# Blockchain Other Industries

## TRANSPORT & SUPPLY CHAIN

Source: Corporate Contact (CC); CrunchBase (CB); Desk Research/Press (DR); Coinmarketcap (CMC); LinkedIN (Li), Estimate (2), No information (N/A)

### aXedras

aXedras is a DLT / blockchain-based infrastructure and application provider with a vision to connect and digitalize the precious metal industry. We combine bullion market expertise and cutting-edge information technology to create tremendous benefits for the stakeholders of the precious metal industry on a global scale. aXedras has developed a distributed Corda application for product and data integrity within the bullion market: the Bullion Integrity Ledger™.

**Token Ticker:**
N/A

**Sub-Category:**
Transport & Supply Chain

**$10,000,000** CB
FUNDING

**$50,000,000** 2
VALUATION

**15** CC
EMPLOYEES CH

### Vault Security Systems AG

Vault Security Systems is solving the world's security challenges with innovative applications powered by a groundbreaking technology: The Blockchain. The ivault™ Blockchain Solutions are both for businesses to improve supply chain networks and logistics management, as well as for every private citizen to protect their valuables.

**Token Ticker:**
N/A

**Sub-Category:**
Transport & Supply Chain

**$3,000,000** CC
FUNDING

**$90,000,000** CC
VALUATION

**9** CC
EMPLOYEES CH

# Top 50 Challenger Companies

The following startups have a good chance of being included in one of the next Top 50 Reports due to employee growth, increase in valuation, and contribution to the ecosystem.

AdHash AG

Category:
Blockchain
Other
Industries

Aktionariat

Category:
Blockchain
Financial
Industry

AllianceBlock

Category:
Blockchain
Technology

AllTokenFootball GmbH

Category:
Blockchain
Other
Industries

Blocksport

Category:
Blockchain
Other
Industries

Cryptix

Category:
Blockchain
Other
Industries

Dacoco

Category:
Blockchain
Other
Industries

Elrond

Category:
Blockchain
Technology

Enzyme

Category:
Blockchain
Financial
Industry

Eternyze

Category:
Blockchain
Other
Industries

LCX

Category:
Blockchain
Financial
Industry

Native Digital

Category:
Blockchain
Other
Industries

Portofino

Category:
Blockchain
Financial
Industry

Prasaga

Category:
Blockchain
Technology

Santiment

Category:
Blockchain
Technology

Smart Valor

Category:
Blockchain
Technology

Streamr

Category:
Blockchain
Technology

STYLE Protocol

Category:
Blockchain
Technology

TrustSwap - The Crypto App

Category:
Blockchain
Technology

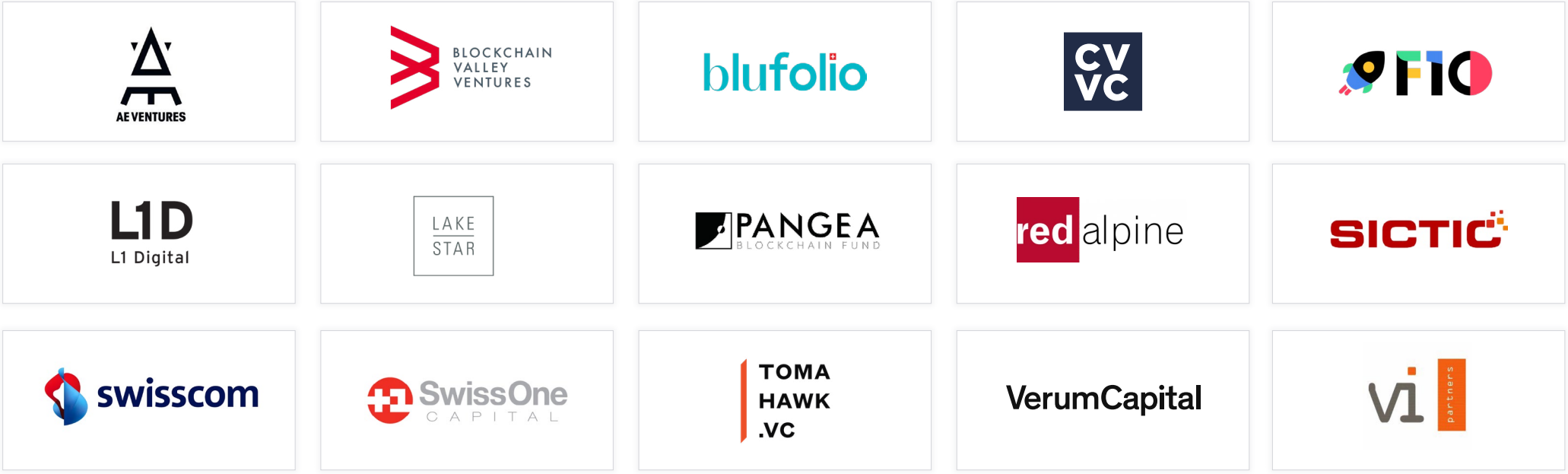
uTrust

Category:
Blockchain
Financial
Industry

# Banks Active in Crypto

ARAB BANK SWITZERLAND
BANK FRICK
BBVA
BCN
BEKB | BCBE
bordier | 1844
Helvetische Bank
Hypothekarbank Lenzburg
incore
ISP INVESTMENT SOLUTIONS PARTNERS
Julius Bär
KALEIDO
LOMBARD ODIER LOMBARD ODIER DARIER HENTSCH
MAERKI BAUMANN & CO. AG PRIVATBANK
NPB | Neue Privat Bank
REYL innovative banking
Swissquote THE SWISS LEADER IN ONLINE BANKING
Syz
UBP UNION BANCAIRE PRIVÉE
Vontobel
VP BANK
Zarattini & Co | Bank

# Blockchain Focused Venture Capital Firms



# Blockchain Technology Solution providers











# Blockchain and Crypto Savvy Law Firms

BÄR & KARRER

BWB Rechtsanwälte AG Attorneys at Law Ltd

DALAW Digital Assets Legal Advisors

EISENRING

EY Law

HÄRTING

Homburger

id est avocats

ILFP

Kellerhals Carrard

LE/AX

LENZ & STAEHELIN

mll

MME

NÄGELE

NIEDERMÜLLER NOTARIAT | NOTARY PUBLIC

NKF

P&TS INTELLECTUAL PROPERTY

PST legal & consulting

pwc

Swiss Blockchain Legal

wenger & vieli Rechtsanwälte

# Digital Assets Service Providers

21finance

BX Swiss

daura

GENTWO DIGITAL

glassnode

N

SDX SIX Digital Exchange

# 05

# CV VC PORTFOLIO

# Investment Thesis

We invest in blockchain because it's more than just technology. Blockchain is a new mindset as well as a game-changing "catalyst technology."

The mindset is one of decentralization, power to the community, and embedded trust. Blockchain technology can fundamentally transition some of society's biggest social, economic, and political challenges of the past into solutions that will build a more sustainable future.

At CV VC, we believe that blockchain is the catalyst for a tech megatrend reshaping the future. We support all features of blockchain as a transformative technology but focus mainly on two features that we believe will revolutionize the way forward for work, society, and economics:

1. Decentralization capacity. Blockchain allows for the democratization of the world's most valuable resources, transforms value systems, and creates new assets.
2. Trust capability. Blockchain is a distributed, robust, secure, privacy-preserving, and immutable record-keeping framework and, therefore, can positively transform the nature of trust, value sharing, and transactions. Blockchain technology can raise trust and legitimacy concerning the functioning of public, economic, and social institutions, most of which are suffering an unprecedented erosion of trust. Without trust, there is no way forward.

CV VC's investment focus is on teams from around the world building the future, using blockchain technology as a catalyst to revolutionize how humanity works, lives, interacts, and transacts.

## CV VC investments are based on six fundamental pillars:

1. Abiding investors: We have been investing in early-stage tech disruptors since 2018, have a committed capital base, and expect to hold investments long-term.
2. Founders for founders: Our investments have full access to a dedicated investment and operational team, successful entrepreneurs, and our complete ecosystem team at CV Labs.
3. Global ecosystemic ethos: We are a leading hub in the worldwide blockchain ecosystem. We contribute globally: advisory, regulatory, technical, networks, co-working, summits, and intelligence from our Swiss headquarters and global epicenters.
4. Industry flexibility: We invest and incubate at an early stage; blockchain is global and decentralized, so we invest everywhere. We invest in disruptors & enterprises that use blockchain to revolutionize the industries they serve.
5. The new economy: We invest in service providers building the infrastructure for the digital asset world, such as custody, market makers, KYC, and tokenization builders.
6. Investment bridge: We offer diversified exposure to blockchain technology alongside CV VC. Our investment certificates ("AMCs"), the Venture Capital focused "Blockchain Technology for Tomorrow ("T4T") AMC, as well as our liquid crypto and digital asset AMCs have similar mechanics and economics as traditional venture capital and investments funds - with the added benefit that they are a fully bankable investment certificate with a Swiss IsIN that can be added into any portfolio and sufficiently flexible to create bespoke solutions efficiently also for a more targeted investor universe if desired

# CV VC Portfolio

AdHash
(SUI/BUL)

Category:
Fintech

Agryo
(USA/BRA)

Category:
Cybersecurity

Asvin
(GER)

Category:
Business solutions

BitFreezer
(USA/UKR)

Category:
Fintech

Blockfrauds
(UK)

Category:
Fintech

Blocksport
(SUI)

Category:
Fintech

Carmachain
(NGA)

Category:
IT Security

Coinrule
(USA/GBR)

Category:
Fintech

Cybera
(USA/SUI)

Category:
Fintech

DoxyChain
(POL)

Category:
Fintech

DSENT
(SUI)

Category:
Musictech

Fastagger
(KEN)

Category:
IT Security

Float Capital
(CYM/ZAF)

Category:
Fintech

Flovtec
(SUI)

Category:
Cybersecurity

Forward Protocol
(PAN)

Category:
Business solutions

Geon
(POL)

Category:
Fintech

Gummys
(SUI)

Category:
Fintech

HouseAfrica
(NGA)

Category:
Cybersecurity

IVE.ONE
(GER)

Category:
Business solutions

MathForMoney
(ZAR)

Category:
Fintech

Mazzuma
(GHA)

Category:
Fintech

NATIX Network
(GER)

Category:
Fintech

Orvium
(EST)

Category:
IT Security

Pravica
(USA/EGY)

Category:
Fintech

Proof
(USA)

Category:
Fintech

Ptolemy
(USA)

Category:
Fintech

Rens Multiverse
(FIN)

Category:
Musictech

Revix
(ZAF/GBR)

Category:
IT Security

Scorechain
(LUX)

Category:
Fintech

ServBlock
(IRL)

Category:
Cybersecurity

SodaWorld
(ZAR)

Category:
Business solutions

Sprinter
(USA)

Category:
Fintech

Tezsure
(USA)

Category:
Fintech

The Swappery
(JPN)

Category:
Cybersecurity

Tracifier
(GER)

Category:
Business solutions

Utopia Music
(SUI/SWE)

Category:
Fintech

Vault Wines
(GEO)

Category:
Fintech

Vereign
(SUI)

Category:
Fintech

Villcaso
(USA)

Category:
IT Security

Xion
(USA/ZAR)

Category:
Fintech

YOM
(NED)

Category:
Fintech

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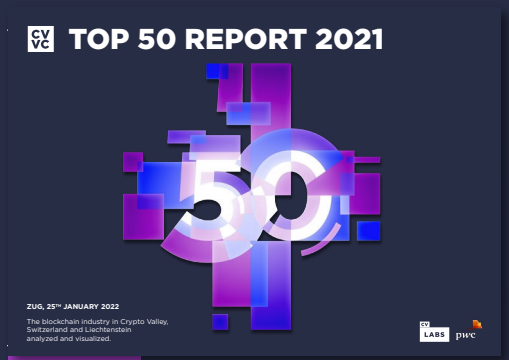


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https://www.cvvc.com/insights

# 06

# CONCLUSION

# About

## CV VC

**We invest in Blockchain. Because it's more than just technology.**

CV VC and its Web3 ecosystem builder CV Labs is a global blockchain investor with hubs in Switzerland, Liechtenstein, South Africa, and Germany.

As a private venture capital company, CV VC offers seed funding and an acceleration program to global tech teams in exchange for equity or tokens. In addition, CV VC provides blockchain industry consulting and advisory to corporates and governments. As amid the founding fathers of Crypto Valley which is the birthplace of Ethereum and home to the largest herd of blockchain unicorns, CV VC & CV Labs is the hub of Crypto Valleys' acumen and a global force driving the dynamics of Web3.

CV VC has already invested in over fifty blockchain startups and is renowned for its entrepreneurial spirit, epitomized by its founders and board members who represent its ethos - Founders for Founders. These include industrialist Alex Wassmer, entrepreneurs Mathias Ruch and Florian Kohler, investment banker Olaf Hannemann, financial expert Ruth Salvisberg, former Finnish Minister Anne Berner, and Philipp Rösler, ex-Vice-Chancellor of Germany & Managing Director of World Economic Forum.

## Bank Frick

Bank Frick specializes in banking for financial intermediaries as well as professional clients primarily based in Liechtenstein, Switzerland, or the European domestic market. They serve and advise fintechs, asset managers, payment service providers, family offices, fund promoters, pension funds as well as trust companies.

The joy of innovation is part of the essence of Bank Frick. For example, as early as 2018, the bank offered trading and custody of leading cryptocurrencies in a fully regulated environment.

Bank Frick has excellent expertise in regulated blockchain banking, developing fund solutions, tokenizing shares, setting up capital market issues - and, of course, in traditional banking. Additionally, Bank Frick brings great expertise in credit card acquiring.

Digitization is at the core of the entrepreneurial bank, as is close personal contact with our clientele. Customers benefit from the short lines of communication and their family-run full-service bank's long-term strategic orientation since 1998.

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