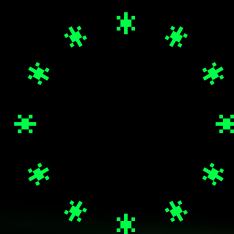


State of European Crypto Report No 1



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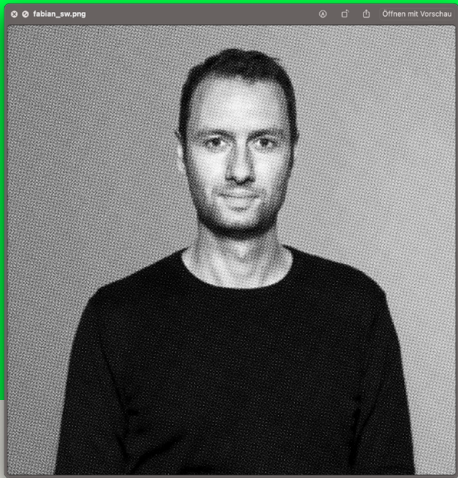


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1_Intro | Welcome to Crypto Europe

1.1 _Why this report?

Greenfield is a European crypto investment firm. We are long-term backers of early developer teams building toward an open, decentralized, and more robust architecture of tomorrow's web.

We have a strong operational approach. **We engage with our portfolio companies and protocols in the crypto ecosystem very early and regularly to learn about the current challenges and in which areas and ways we can make a significant contribution.**

We figured that the fruits of this research itself could already be helpful to the community. Therefore, we want to share and discuss some of our ongoing learnings and analyses with this report.

1.2 _Why a report on the State of European Crypto?

Fortunately, there are already several excellent reports on global crypto development. What we have noticed, however, is that regional crypto reports are still scarce. This may have something to do with the fact that crypto has had the global market in mind from the beginning and traditional market boundaries do not apply. Another reason may be that reliable geo-data of providers and users is pretty hard to get. Of course, this can be considered a feature, not a bug.

Nevertheless, we believe looking at regional specifics is quite useful - particularly with regard to the issues we address in this report.

Focus of this report

- how founders of protocols and companies with a strong European footprint view the current and future state of crypto overall – and the role of Crypto Europe in it;
- what talent pool they can access in Europe;
- what tailwinds or obstacles the environment offers relative to other crypto markets;
- how active and successful European protocols are on the developer front.

We are still in the early days of crypto. That's why we look less at adoption indicators in this report. Now is the time to build. The focus lies on the founders and developers, their environment and their progress.

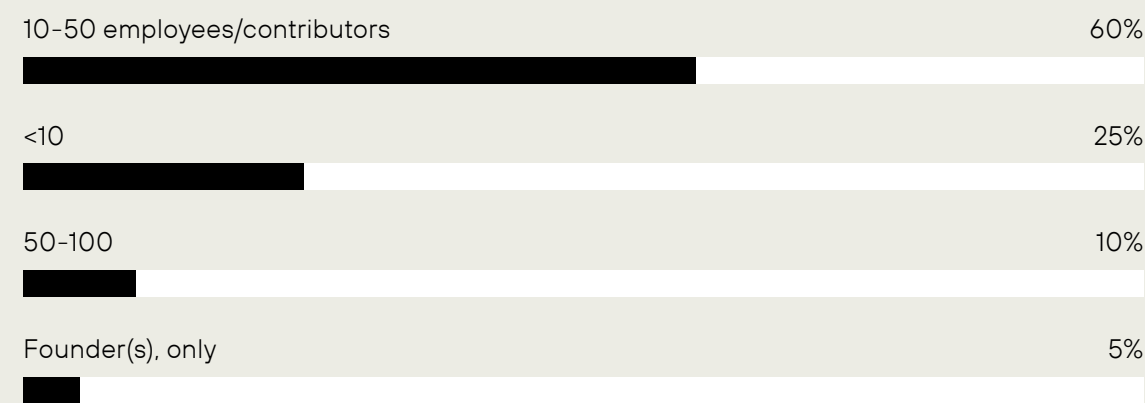
1.3 _Research Claims, Methodology, Shoutout

State of European Crypto

To find out the current status quo of Crypto Europe, we surveyed 68 founders of crypto projects with a strong European footprint in an online survey (using Typeform). By this, we mean **crypto protocols and companies whose founding team or core team consists predominantly of Europeans and/or whose entity's registered office is in Europe.**

We asked questions about how the founders conceive the development of the crypto industry now and in the future and what role European projects and European talent is playing. The survey was active from January 31 to March 20, 2023.

Composition of the crypto projects surveyed:



At 60%, the lion's share of respondents have already outgrown the core team and employ 10 to 50 people. About 30% have up to 10 resident contributors. Only 10% of the companies surveyed have more than 50 people contributing. No project exceeded a staff of 100.

State of European Crypto DEV

To track the development growth and impact of Crypto Europe, we analyzed 42 influential protocols and companies with significant European footprints (exact definition as above). We used Github archive data and juxtaposed their market cap with comprehensive market data. We've processed the data using our proprietary data platform to extract committing creators from push events and aggregated the data over time. We used this data to compose, among others, the EDIC - a new index for the European crypto DEV community. The list of analyzed protocols and projects partially overlaps with the survey participants from Chapter 3 (State of European Crypto), but it is not entirely congruent.

State of European Talent In Crypto

Using online research and expert interviews, we compiled a list of master's degrees at European universities to provide an up-to-date overview and trends in university education for crypto, focusing on business and technical roles.

We further compared the founders' views gathered in the survey about talent influx (Chapter 3) with actual job applications and hires. We also identified overall trends in supply and demand in the training and recruitment market and explored possible solutions for imminent shortages. To achieve this, we teamed up with Missing Link, a leading European recruitment agency specializing in Web3 and crypto. We used LinkedIn data to identify talent pools and Dealroom data to cluster companies into two buckets (early-stage startups and growth-stage companies).

Kudos to the team of Missing Link, who immediately embraced the idea behind this report and went straight to work, giving their all to launch together with Greenfield.

1.4 _Caveats of this first timer

When you do something for the first time, you rarely do it perfectly. Also, a regional crypto report offers challenges and limitations you should consider when reusing the results:

- What makes a crypto project European? We suggest an approximation and operationalization that is certainly open to discussion. We may also have overlooked individual protocols that – according to scope – we should have included.
- In the individual research chapters of this report (Chapters 3–5), we used a partially different database. For Chapter 3, we invited founders from our target group. However, actual participation was anonymous. For Chapter 4, we decided on a starting allocation for the EDIC Index of 42 protocols with a strong European footprint. Chapter 5 draws on an extended database from 388 crypto and Web3 companies.
- We did not use geo-data to determine how active the European crypto developer scene is (Chapter 4). Instead, we used data from commits and users acting on behalf of projects with a strong European footprint. Some of the programming itself may have happened outside of Europe.

Our goal is to expand and streamline the database of this report with the help of the community, to raise its profile with each new edition, and to create a barometer for the development of the European crypto space with a regular publication. We appreciate feedback, suggestions, additions or contribution ideas: europa@greenfield.xyz

2_Summary | Six Key Findings for Crypto Europe

For the first State of European Crypto Report, we as a European crypto investment firm, wanted to find out how Crypto Europe was doing in Q1 2023. We asked founders of projects with a significant European footprint for their assessments, analyzed developer activity of relevant protocols and companies in the European ecosystem, and looked at the actual movements in the crypto talent market.

1 These are our key findings:

- **After the most challenging year many founders have experienced, confidence prevails when looking ahead to 2023 and the future of Crypto Europe.** In retrospect, 2022 is seen as a cleansing year that further strengthened the building ethos of crypto (“The year the fakers went to jail”). A comeback is expected for 2023 and, in the long term (until 2030), nothing less than the “ubiquity of crypto”.
- **Regulation is considered by far the most influential topic of 2023,** followed by Zero Knowledge (ZK) as one of the most promising technologies, and the search for various “catalysts for adoption” as one of the core challenges. However, the emphasis on regulation is not seen as a stumbling block for European crypto projects. On the contrary: the founders regard Europe – especially the EU with MiCA as a comprehensive and differentiated framework – ahead of the game. Clarity thus

seemingly outweighs any restrictions on specific business areas and practices. This result indicates the significance of regulatory differences and approaches for future competition among regional ecosystems.

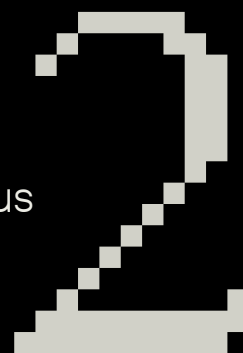


- **Lisbon is crowned the Capital of Crypto Europe – and beyond.** The founders of protocols and companies with a strong European footprint regard Lisbon as the world’s most important crypto hub, followed by New York City and Berlin. Paris (in 7th place) is the third European metropolis in the top ten. According to the respondents,



Lots of American crypto migrants here in Lisbon.

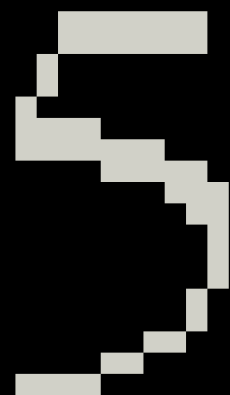
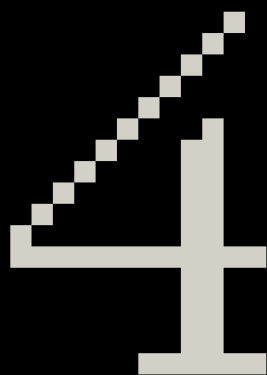
Lisbon earns its position because of its strong DeFi scene. Many companies and projects are also drawn to the Portuguese capital for tax reasons. Besides the talent influx from other parts of Europe, Lisbon benefits most from what some founders consider a US crypto brain drain.



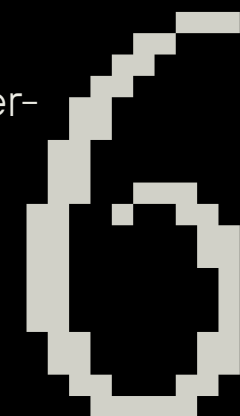
New York City, however, still offers good access to venture capital and Tier1-conferences. Berlin stands for European startup culture, a remarkable crypto track record, and one of the world's finest and most active developer pools. Paris is highlighted for its thriving crypto-summit scene and strong Web3 and NFT ecosystems.

EDIC-Index: 11,600 points

- **EDIC (European Developer In Crypto) Index at 11,600 points: Crypto Europe continues building despite its setback in market share.** The index we introduce in this report features 42 of the most influential crypto protocols and companies with strong European footprints. They count a total of 1,300 monthly developers in Q1 2023 (as measured by their GitHub repositories). This is 300 more than at the end of 2022, marking the strongest quarterly increase in our database (Jan 2020+). This influx is remarkable, considering that the members of the index have lost ground in terms of market cap compared to the broader market. The European selection now reaches not even \$20B. This is just over 2.5% of the market cap of ETH and BTC combined. Due to strong developer growth despite declining market share, the index increased by 400 points compared to the end of 2022. From this, we can infer a certain sustainability of the influx and retention of talent, which is quite resilient to market movements.



- **As more European crypto projects mature, shortages loom in commercial talent.** The founders surveyed said that in 2023 they would like to strengthen their team primarily with marketing and comms, as well as sales and business development professionals. This fits pretty well with another statement of the majority of the founders that “user awareness and adoption” is currently the biggest challenge of their crypto project. However, filling these positions is becoming increasingly challenging, as an analysis by our friends at Missing Link of advertised positions and actual hirings revealed.
- **More European universities are coming up with dedicated crypto master's degrees.** University crypto hubs are forming foremost in the UK, Ireland, and Spain. A veritable series of new programs is planned across the continent for the winter semester of 2023. Most current and future courses on offer relate to finance and economics. This makes it quite likely that more commercial talent will enter crypto in the upcoming years. At the same time, Europe must be careful not to neglect university education in crypto tech. The need for developers and architects will remain high for core technology. And when it comes to the core, as our survey shows, founders do not want to rely on external support at all costs.



3_State of European Crypto | A Founder's Survey

3.1 _tl;dr

After the most challenging year many founders have experienced, confidence prevails when looking ahead to 2023 and the future of Crypto Europe. Regulation is seen as the most influential topic in the course of the year. And aligned with this topic, Europe seems ahead of the game. Lisbon is crowned the Capital of Crypto Europe – and beyond.

3.2 _Block on crypto outlook

Describe crypto 2022 in one word:



3.2.1 2022: Crypto in calibration mode

We asked the founders to summarize the crypto reality of 2022 in one word.

The answers can be clustered into two main streams:

Rollercoaster

For many founders, 2022 was obviously among the most challenging years of their professional lives so far ("Hard", "Rough", "Catastrophe"). With "Rollercoaster", "Turbulent" and "Mind-blowing", they expressed how an already extremely agile industry outdid itself. Significant setbacks alternated at a dizzying pace with short recovery phases and significant technological advances.

“The year the fakers went to jail.”

Cleansing

At the same time, **founders see 2022 as a turning point in the industry's further development.** They are generally striving for the builder ethos ("Time to build") and a return to creating real value and utility ("Recalibrating", "Reality check"). Some see crypto emerging this year as more resilient overall ("Stabilization"), probably also because some harmful elements have removed themselves from the system ("Cleansing"). One participant didn't quite stick to the 1-word requirement. But her comment sums up this feeling very nicely: "The year the fakers went to jail."

3.2.2 2023: The Year of Crypto Phoenix...

Describe your expectations for crypto 2023 in one word:



When we ask the founders about their expectations for 2023, confidence prevails for a productive and successful year. **These are the predominant themes:**

“ The comeback year!

Comeback
After the industry suffered in public perception in 2022, founders expressed their belief in a rebound of crypto in about one-third of the one-word descriptions (“Survival,” “Phoenix,” “Maturity,” “Renaissance,” “Comeback”).

Building
Almost half of the expectations, on the other hand, focus once again on the (further) development (“Building”, “Decentralization”, “Substance”, “Real”).

3.2.3 2023: ... and Regulation

What are the most important developments in crypto in the course of 2023?



For 2023, we also wanted to know in more detail what significant further developments we can expect over the year.

The results speak for themselves. In the open question (no options were given), 70% of the founders mentioned regulation.

In second place is a cluster of digital identity and privacy topics and zero-knowledge (ZK), a suitable enabler technology.

In 3rd place, various mentions of adoption catalysts at the individual user level and commercial integration can be grouped ("Commercialization", "UX", "Utility", "Web2 moving into Web3", "Crypto transactions on merchant's website", "Consumer brand NFT adoption").

In 4th place are mentions about the continued success of existing and new Layer 2s (25%). General thematization of further decentralization reached 5th place (15%).

Honorable Mentions:

It's fair to add two clusters that did not make it into the top 5 but were **increasingly thematized by participants closer to the end of the quarter**:

- Programmable Bitcoin / Lightning Network (10%)
- Account Abstraction (10%)

3.2.4 2030: Crypto Dominion

Describe crypto 2030 in one word:



Finally, we asked the founders to look a little further into the future. Here, too, the answers can be predominantly clustered into two currents.

Controversy

For some of the founders, it will still not be clear in seven years whether crypto technology will advance humanity ("Useful", "Driving societies", "Property rights) or possibly lead to disaster ("Dystopian", "Controversial").

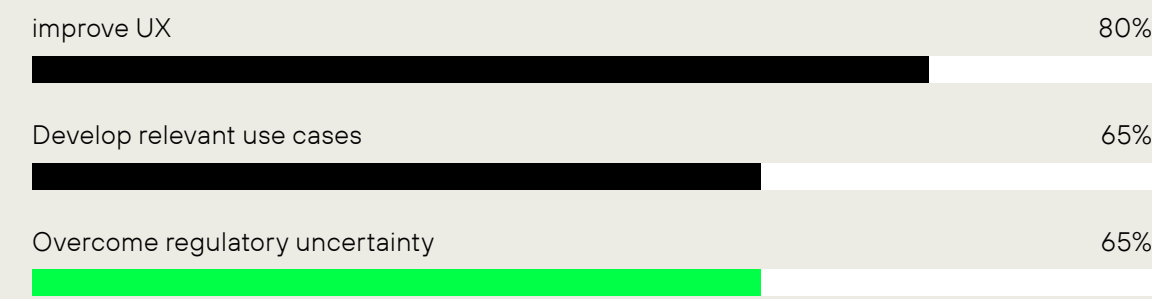
“ In 2030, the word crypto doesn't exist anymore because it's everywhere.

Ubiquity

However, most respondents leave no doubt that in 2030 hardly anyone will be able to ignore crypto. In 2030, crypto not only works ("Seamless", "Efficient"), but crypto solutions are practically ubiquitous and successful ("Relevant", "Integrated", "Mainstream", "Established", "Ubiquity", "WAGMI", "WGMI", "Everywhere").

3.2.5 UX, relevant use cases, and regulation are seen as the biggest challenges for mass adoption

What are the three most pressing challenges for the mass adoption of crypto?



Of course, there are still some roadblocks to be cleared on the way to “Crypto Dominion”. We asked the founders about the biggest challenges for global mass adoption and gave them eight multiple-choice options. A clear top 3 emerged.

Two of the top mentions are in the hand of the crypto projects themselves to solve: With 80% of the mentions, improving UX is at the top of the list.

In second place is developing use cases that many users see as relevant (65%) and understood.

The third challenge, “Overcoming regulatory uncertainty”, can only be indirectly influenced by the industry. This requires good education and relationships with national and supranational policymakers.

3.2.6 User Awareness is key to success

Rank the most pressing challenges for the future success of your project.

1	User awareness & adoption	2.6 average
2	Raise funds	3.47 average
3	Acquire talent	3.59 average
4	Governance and descision making	3.69 average
5	Find product market fit	3.71 average
6	Technical roadblocks	3.93 average
7	Regulatory uncertainty	4.05 average

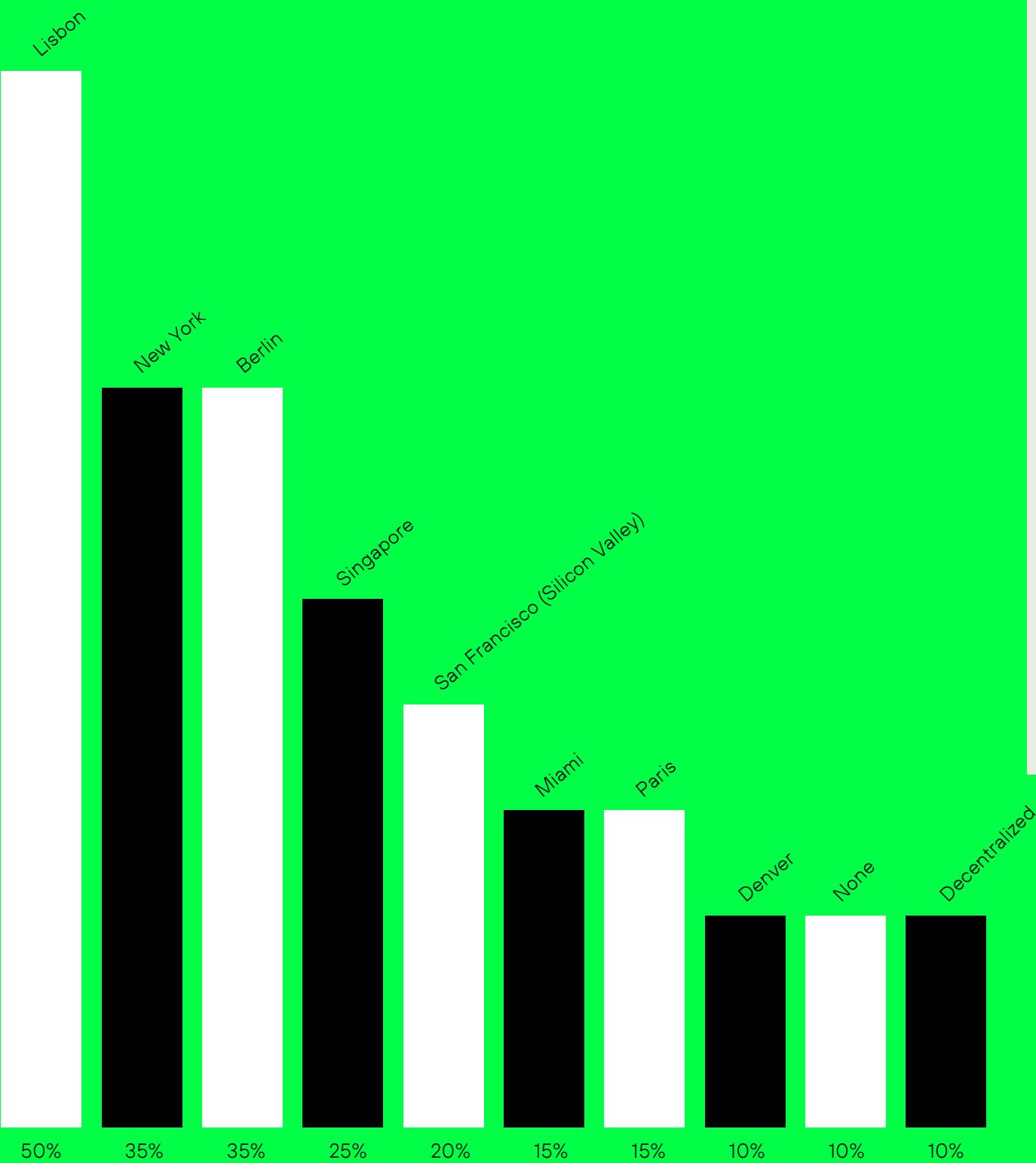
When it comes to the success of their own protocol, we asked the founders to rank the importance of seven challenges (the lower the average rank, the higher the relative importance). Here, the spread of answers was broad, which suggests quite different core challenges. However, the first and last rankings are interesting: with an average rank of 2.6, “User awareness and adoption” is at the front. This already explains in part why many protocols want to expand their marketing and sales competence, as we will elaborate later on in this report.

“Regulatory uncertainty” takes the last place (average rank 4.05). This is a surprise, as precisely this point ranked second in the question about the most significant global challenges (see Chapter 3.2.5). **This result could indicate that Europe is already a few decisive steps ahead regarding regulatory clarity.** This view is backed by the surveyed founders themselves in the next block of questions “_Block on Europe.”

3.3 _Block on Europe

3.3.1 Lisbon is considered the world’s most relevant crypto hub

Overall, what are the top crypto hubs worldwide? (name 3)



With this question, we certainly have to consider the home bias of the surveyed founders. Nevertheless, the result is remarkable. Lisbon takes the top spot among the world’s most important crypto hubs. Half of the survey participants voted the Portuguese capital into their personal top 3.

Berlin, another European metropolis, and New York City, with 35% mentions each, share 2nd place.

In 4th place, Singapore is the only Asian hub in the top 10.

Other US hubs, such as Silicon Valley, Miami and Denver, also ranked highly. Paris, 7th place, completes the European hubs’ overall striking performance with three representatives in the top 10.

It is worth mentioning that a significant proportion (20%) is skeptical about the hub concept with regard to crypto in principle or at least at present. We have pooled these mentions under “None” and “Decentralized.”

One founder put it this way: “Really hard to single out three. Crypto is distributed all over the globe. There are maybe ~15-25 places that are big, each with slightly different focus/strengths.”

“Crypto is distributed all over the globe. There are maybe ~15-25 places that are big, each with slightly different focus/strengths.

In fact, many participants assigned different focuses and advantages to the hubs.

New York City is said to offer good access to venture capital and Tier1-conferences. In Miami, the Bitcoin community, in particular, enjoys the support of the regional political establishment. Silicon Valley impresses with overall good conditions (established start-up network of seed capital, tech talent and innovative mindset). Note that most survey participation occurred before the upheavals surrounding Silicon Valley Bank. It remains to be seen how the Valley holds up in a follow-up report).

Singapore is considered the gateway to Asia.

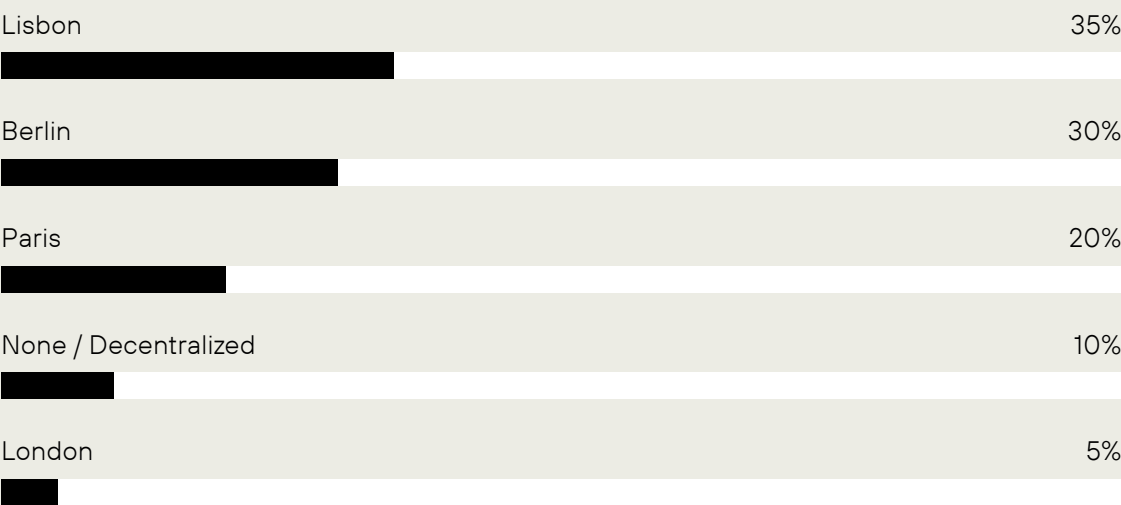
In the European top rankings, Paris is highlighted for its thriving crypto-summit scene and strong Web3 and NFT ecosystems. Berlin stands for European startup culture, focus on Ethereum (among others through the presence of the Ethereum Foundation), a track record of established crypto projects and a strong developer scene (“Most active developer teams”).

However, some participants noted that Berlin and the US hubs are experiencing a brain drain toward Lisbon. Lots of American crypto migrants here in Lisbon.

According to the founders, the hub earns its position in part because of its strong DeFi scene. Many companies and projects are also drawn to the Portuguese capital for tax reasons.

3.3.2 The European crypto scene gathers in Western Europe

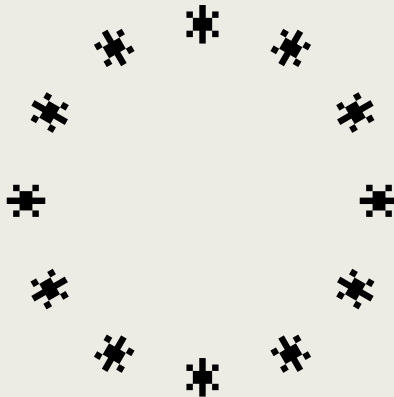
Overall, what is Europe’s most relevant crypto hub?



We only allowed one nomination regarding the most relevant European crypto hub. As expected from the global results, Lisbon won with 35% of the mentions, closely followed by Berlin (30%) and Paris (20%) in the top 3. London (5%) made it into the top 5.

It is essential to state that the top 5 are synonymous with the overall list. Say, there have not been any additional suggestions at all. Thus, Crypto Europe - at least if we ask about hubs - gathers in Western Europe’s metropolises.

This result might surprise some readers, as many core teams often consist partly of developers from Eastern Europe. We are eager to see whether a metropolis east of the Oder will establish itself as a crypto center in the coming years.



3.3.3 Crypto Europe is leading the pack regarding regulatory clarity - also strong in tech stack, ReFi and privacy

In which fields is Crypto Europe the leading force?



A small recap here: regulatory challenges have already been identified as the critical issue for 2023 by the founders surveyed (3.2.3). On the way to global mass adoption, regulatory uncertainty ranks second (3.2.5). However, when it comes to the success of their own protocol, they consider the same problem of relatively low importance (3.2.6). This apparent inconsistency is

resolved when we ask about the fields in which Europe is leading the crypto industry:

40% name “Regulation” as the top European discipline. We will keep the interpretation of this result brief at this point. Just this much: founders seem to consider it helpful that the European Union is leading the way with MiCA and other regulations on the way. **Clarity thus seemingly outweighs any restrictions on specific business areas and practices.** We refer to Chapter 6, in which we provide an overview of the status quo of crypto regulations drafted by the EU – compared to the US.

Additional strengths of Crypto Europe:

One in four survey participants highlighted the “tech stack”, including “deep tech”. One in five cited Europe’s talent pool. The “Developer communities” account for 10%. Combining these three mentions, **Crypto Europe appears well positioned regarding crypto core technology.**

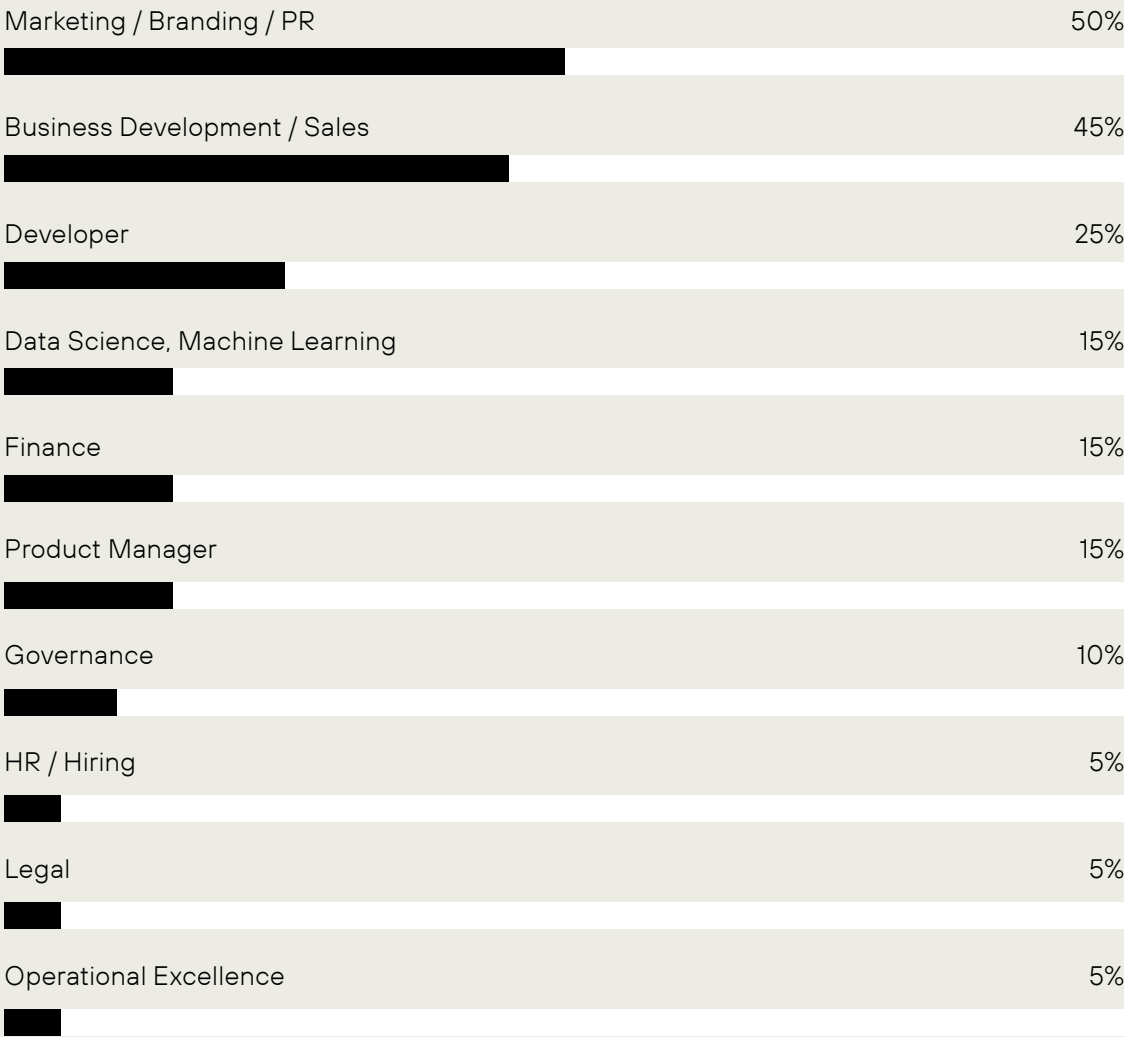
Worth noting: for some founders, Europe also takes a leading position in more impact-oriented topics such as ReFi and Sustainability, including carbon neutral and energy efficient blockchain networks, (20%) and Privacy (15%).

Overall, almost all responding founders identified at least one topic where Crypto Europe is ahead in international comparison. Only 5% answered the question with “None”.

3.4 _Block on Talent

3.4.1 Protocols in search for broader business talent like Marketing and Sales

What are the top skills you want to add to your organization?



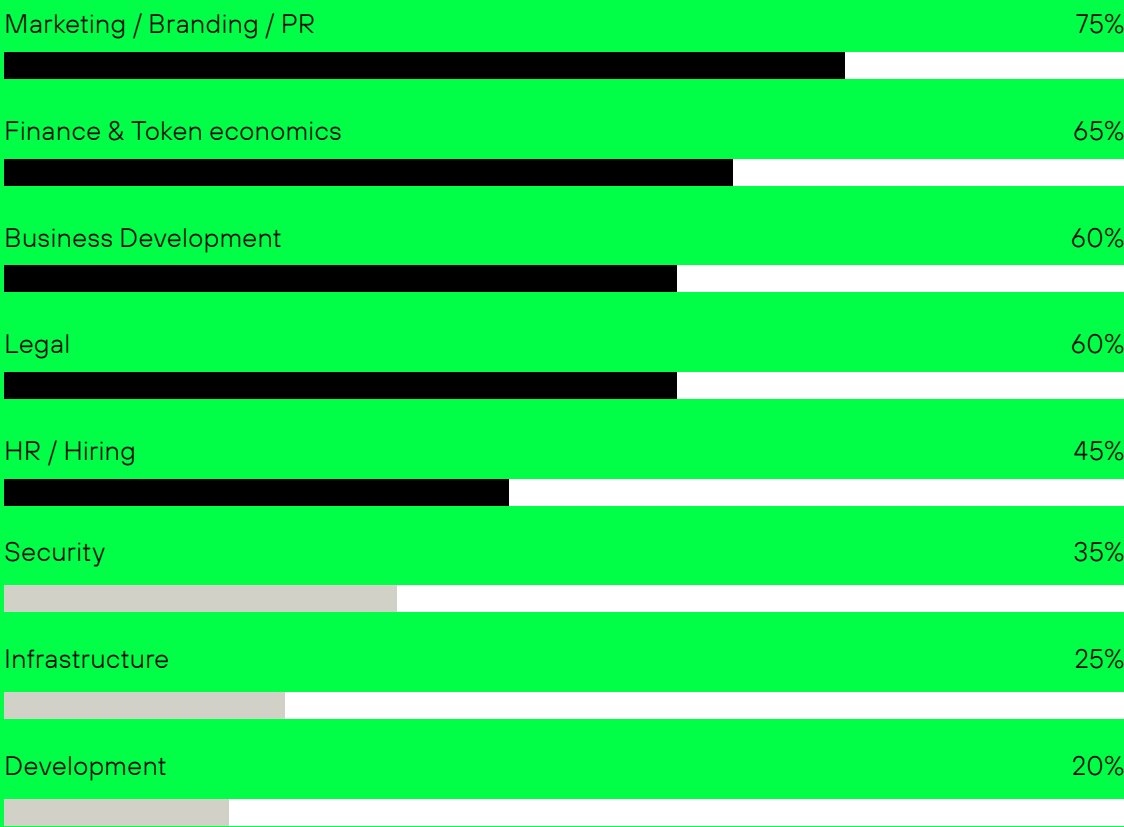
We asked the founders in which three categories they are looking for new colleagues. One in four would like to continue hiring developers. 15% want to expand their data competencies

(“Data Science, Machine Learning”). However, with “Marketing” (50%) and “Business Development / Sales” (45%), the top two positions are taken by business functions that have nothing to do with crypto product development.

We can thoroughly explain this result by remembering when the founders were asked about the challenges for further success of their own protocol (3.2.6), “User awareness” was at the top of the list. The other mentions also indicate that founders want to increase internal competencies in various business functions (Finance 15%, Product Manager 15%, Governance 10%, HR 5%, Operational Excellence 5%).

3.4.2 Core Development is supposed to happen in-house

In which areas would you be happy to receive external help?



A startup organization cannot immediately fill all business functions with employees. Therefore, besides the question about planned new hires (3.4.1), we were interested in the roles the founders are very open about external support – be it via the community, their investors or other partners.

Again, the Marketing profession received the most mentions (Marketing, Branding, PR – 75%).

Branding and public relations seem to have a particular urgency, and the founders are eager for any meaningful internal or external support.

This is followed by other business-related functions such as “Finance” (including industry-specific token economics – 65%), “Business Development” (60%), “Legal” (60%) and “HR, Hiring” (45%). It is striking that the more it goes toward the tech core business, the more founders seem to rely on their own team. In the case of “Cyber Security”, 35% are still open to accepting external support, while in the case of “Infrastructure”, it is only one in four. In the case of “Development”, only one in five.

3.4.3 Europe is the best place to find talent

Sort regions according to where you can most easily find developer talent.

1	Western Europe	1.45 average
2	Eastern Europe	1.7 average
3	North America	3.55 average
4	Latin America	3.8 average
5	Central & Southern Asia	5.05 average
6	Eastern Asia	5.8 average
7	Middle East & North Africa	6.9 average
8	Sub-Saharan Africa	7.75 average

According to the founders of protocols with a strong European footprint, it is easiest to find the right talent right on their doorstep. By a wide margin, they chose Western Europe (average ranking: 1.45) and Eastern Europe (1.7) for the top spots from a list of eight regions. These were followed by the Americas (3.55 to 3.8), then Asia (5.05 to 5.8) and finally the Middle East and Africa (6.9 to 7.75).

4_European Developer In Crypto Index (EDIC)

4.1. _tl;dr

The bear market did not leave protocols and companies with a strong European footprint unscathed. However, although their market capitalization dropped significantly, the influx of new builders in crypto is unabated. This is underscored by the European DEV in Crypto Index (EDIC), which we introduce in this report.

4.2 _The EDIC Index is intended to measure the resilience of European DEV growth

Our goal was to build an index representing the European crypto ecosystem’s financial state and developer growth. Its significance aims at the still early era of the crypto industry. Its primary purpose is to provide a central indication: How resilient and sustainable is the growth of Crypto Europe’s DEV community? EDIC intends to help determine whether the influx and activity of European developers can withstand difficult economic and financial times.

Therefore, we created the index based on the following data and metrics: We included 42 influential crypto projects with strong European footprints across different verticals and development stages in the EDIC Index. Then, we

- looked at the number of unique monthly active developers of these projects - extracted from their GitHub repositories - over time (4.3) and

- compared the market cap of the EDIC projects (their native token, if applicable) with the broader global market development represented by ETH and BTC. (4.4).

We came up with the following formula:

Formula

$$\text{EDIC} = \frac{\text{number_of_monthly_active_developers_in_EDIC_projects} \times \text{EDIC_projects_market_cap}}{\text{eth_and_btc_market_cap}}$$

List of projects that make up the initial European Developer in Crypto (EDIC) Index

1inch	Chiliz	Morpho Labs	Sorare
Aave	Composable Finance	Mycelium (TracerDAO)	Sovryn
Aragon	Eden Network	Nexo	StakeWise
Argent	Elrond	Nexus Mutual	Tezos
Arweave	Euler	Nym	Travala
Aztech Network	Seda Protocol	OpenZeppelin	Trisolaris
Basic Attention Token	Fuse Network	Polkadot	Vega Protocol
Bancor	Gelato Network	Quant Network	Worldcoin
Celestia	DFINITY	Ref Finance	XDEFI Wallet
Celo / Mento	Liquity	Request Finance	
Celsius Network	Moralis	Safe	

4.3. **_1,300 contributors: Developer influx and retention marks a new all-time high**

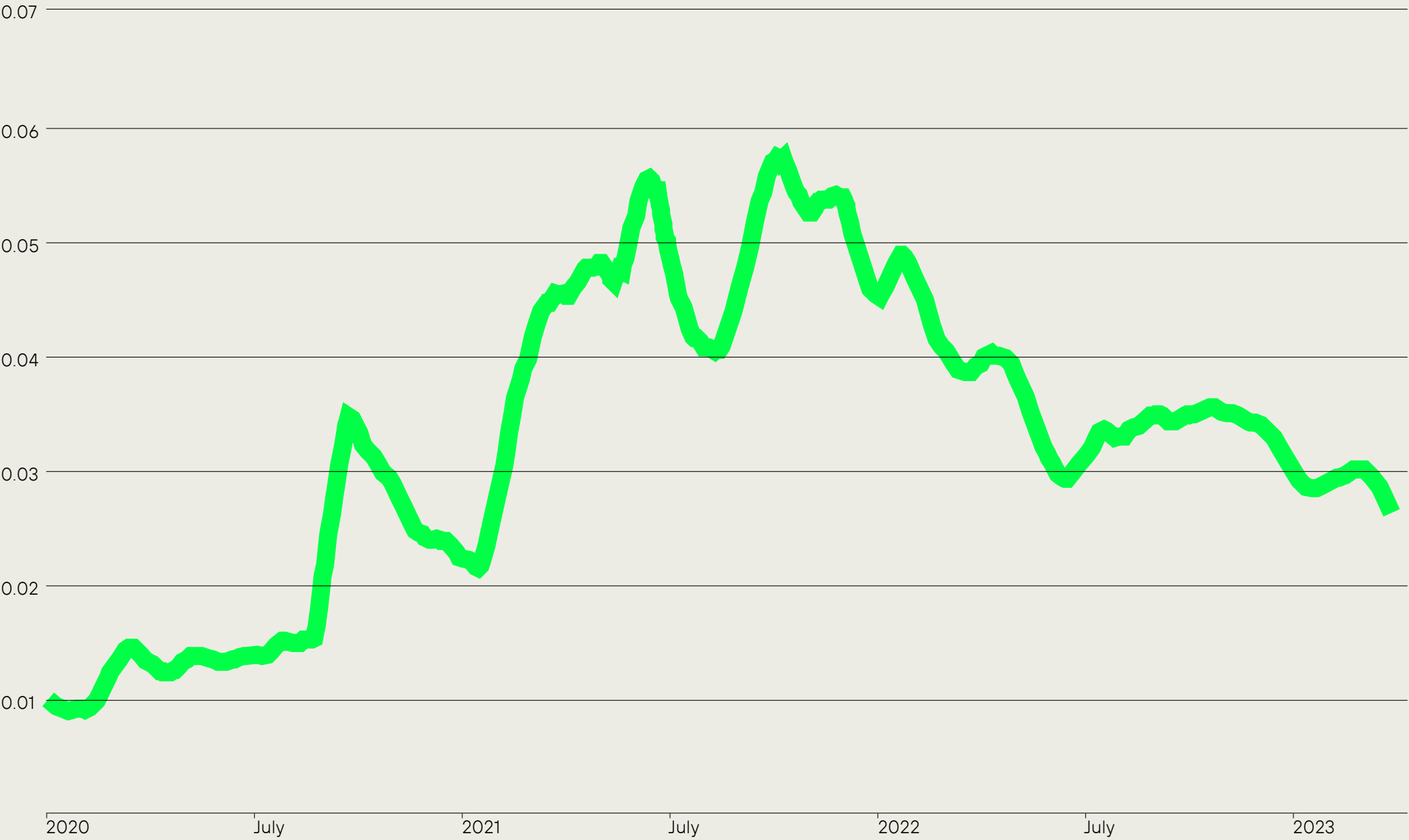
Number of unique users creating commits in GitHub for projects of the EDIC Index | Jan 2020 - Mar 2023



Our database started in January 2020. Since then, the influx of new developers for the protocols and companies in the EDIC Index has increased sharply. Mid 2022, the number leveled off to around 1,000 monthly active developers (=unique monthly users creating at least one commit in GitHub). With 300 more contributors in this year’s first three months, this sideways movement could now be broken through. At the end of Q1 2023, monthly active developers for the members of the EDIC Index reached 1,300, a new all-time high.

4.4. **_Market Cap ratio down to 2.5%: ETH and BTC outperform Crypto Europe during Q1 surge**

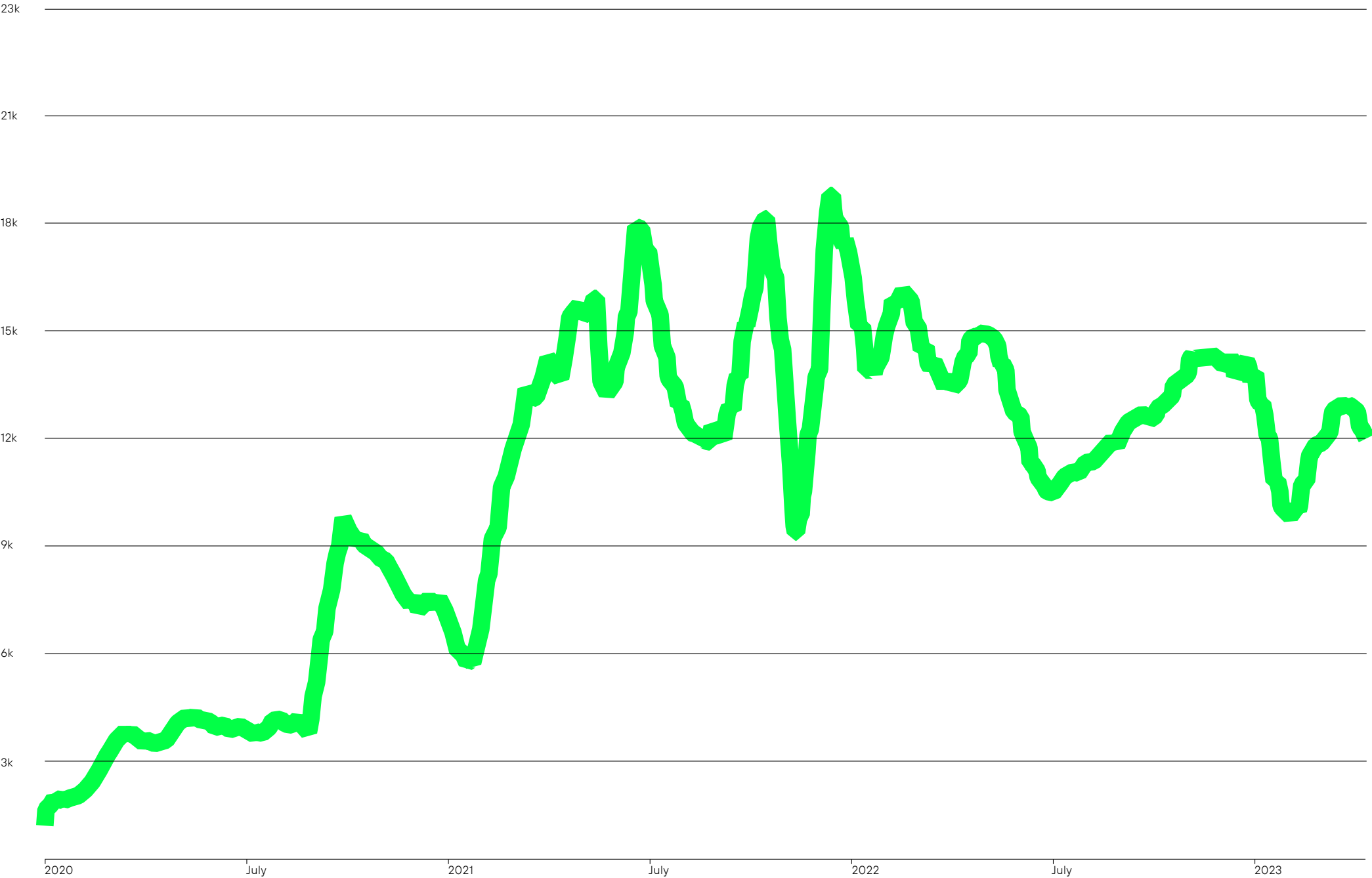
The ratio of the summed market cap of the EDIC projects to ETH and BTC combined | Jan 2020 – Mar 2023



With a total market cap of almost 6% compared to ETH and BTC combined, the 42 European crypto projects in the index peaked in Q4 2021. Since the end of the crypto summer, however, they have been increasingly weaker. In principle, we expected this more volatile development, as smaller projects generally have a more challenging time in bear markets than the top dogs. What is surprising is that Crypto Europe did not come close to keeping pace with the recovery movement of ETH and especially BTC in the first three months of this year. The European selection in the index has fallen behind significantly. It currently stands at a market capitalization of not even \$20B. This is just over 2.5% of the market cap of ETH and BTC combined.

4.5. _EDIC at 11,600 points: Crypto Europe continues building despite its setback in market share

The EDIC Index | Jan 2020 - Mar 2023



At the end of Q1, the EDIC Index scored 11,600 points. The index has been moving in a corridor between 9,000 and 18,000 points for almost two years. The critical observation we can derive from its most recent development is that even in the bear market and especially in times when Crypto Europe is underperforming compared to the broader market, the DEV community remains loyal to Europe. Only the record number of monthly active developers in the last few months prevented the index from slipping further out of the sideways zone.

These are good conditions for a further flourishing European crypto ecosystem. There is ongoing investment in development, and apparently, the talent influx is sufficient to support this growth path so far.

In the next chapter, we look closely at the trends regarding the supply and demand side of the crypto talent market.



5_State of European Talent in Crypto

5.1 _tl;dr

Degree courses for crypto have been a rarity at European universities. This is changing with increasing vigor. A whole series of new programs is planned for the winter semester of 2023. Most of the courses on offer relate to the financial aspects of crypto. Crypto tech remains the exception. At the same time, the crypto industry’s need for talent is increasing enormously across the board. Significant shortages are developing in marketing and sales roles.

5.2 _Offering of crypto-dedicated university degrees is expanding - Emphasis on Finance

More and more European universities offer dedicated master’s degrees for blockchain and crypto. Currently, hubs are UK and Ireland (Dublin City University, ICMA Centre /Henley Business School, Imperial College Business School, Swansea, University, University of Birmingham, University Stirling) and Spain (Universidad del Pais Vasco, Universidad Europea de Madrid, Universidad Europea Miguel de Cervantes, University of Alcala, University Salamanca, Zigurat, Innovation & Technology Business School, Nticmaster).


Also, islands like Cyprus and Malta provide Master’s degrees (Malta: Master of Science in Blockchain and Distributed Ledger, Cyprus: Master’s in Blockchain and Digital Currency). In Germany, TUM Munich currently offers a Certificate (Blockchain and Distributed Ledger Technology Manager). A Master’s degree is planned.

“Blockchain technology blurs borders between academic disciplines in universities. My Digital Assets classes attract students from economics and management, as well as from many other departments, ranging from politics to computer science. The unprecedented multidisciplinary creates many interesting opportunities. Without a doubt, the soaring interest of students in Web3 technologies makes blockchain one of the most exciting topics in universities these days.

The Frankfurt School of Finance and Management offers a Post-Experience Master in Blockchain & Digital Assets. Moreover, the University Mittweida has an MSc in Blockchain and Distributed Ledger Technologies. Most of

these master's degrees focus on the financial part of crypto. Still, there are some with a more technical emphasis, like MSc in Computing (Blockchain and Distributed Ledger Technologies) at Dublin City University, Ireland, the

Master Blockchain and Big Data at Nticmaster in Madrid, Spain, the MSc in Financial Technology at Swansea University, UK or the Master in Blockchain and Smart Contracts at University Salamanca, Spain.

Prof. Dr. Paul P. Momtaz 
Professorship for Entrepreneurial Finance
TUM Munich

Dedicated master’s degrees for blockchain and crypto of European universities

☐ Finance orientated degrees ☐ Tech orientated degrees

University	Location	University Degree	Launch Date	Focus Topics	Language
Bologna Business School ↗	Bologna, Italy	Master Finance and Fintech	Launched	Blockchain, Smart Contracts	English/Presence
Dublin City University ↗	Dublin, Ireland	MSc in Computing (Blockchain and Distributed Ledger Technologies)	Launched	Blockchain, Blockchain Scalability, Developing Blockchain Systems, Public Key Cryptography, Security Protocols, Cyber Security	English/Online
EU-Business School ↗	Barcelona, Spain	MBA Blockchain Management	Jan. 2024	Blockchain	English/Presence
Eötvös Loránd University ↗	Budapest, Hungary	Computer Science MSc Program – Financial Technology specialisation	Sep 2023	Cryptography	English/Presence
Frankfurt School of Finance and Management ↗	Frankfurt, Germany	Master in Blockchain & Digital Assets	Launched	Blockchain, DeFi, Token-based Economy, NFTs	English/Online and presence
Founderz Business School ↗	Online (collaboration with Binance)	Online Master in Blockchain and Web3	Recently, Feb 2023	Blockchain, Cryptocurrencies, NFTs, Metaverse, Smart Contracts	English/Online/Metaverse
GBSB Global Business School ↗	Online		Launched	Token-based Economy, Smart Contracts, Cyber Security, Blockchain, DeFI,	English/Online
Hochschule Mittweida ↗	Mittweida, Germany	MSc in Blockchain and Distributed Ledger Technologies	Launched	Blockchain, Smart Contract, Cryptography	English and German/Presence
ICMA Centre (Henley Business School) ↗	Reading, UK	MSc in Financial Technology	Launched	Blockchain, Cyber Security	English/Presence
Imperial College Business School ↗	London, UK	MSc in Financial Technology	Launched	Blockchain, Token-based Economy	English/Presence
Montpellier Business School ↗	Montpellier, Frankreich	MSc in Finance	Launched	Cryptocurrencies	English/Presence
Nticmaster ↗	Madrid, Spain	Master Blockchain and Big Data	Launched	Blockchain, Smart Contracts, Dapps Ethereum Development	Spanish and English/Presence
Swansea,University ↗	Swansea, UK	MSc in Financial Technology	Launched	Blockchain, Smart Contracts, Cryptocurrencies	English/Presence
Three Points, School for Digital Business ↗	Online	Master in Blockchain and Crypto	Launched	Blockchain, Cryptocurrencies, DeFi, DAOs, Token-based Economy	English/Online
TUM ↗	Munich, Germany	Certificate	Oct 2023	Blockchain, Smart Contracts, Token-based Economy	English/Online
Universidad del Pais Vasco ↗	Bilbao, Spain	Master in Blockchain and Crypto	Oct 2023	Blockchain, Cryptocurrencies	Spanish/Presence
Universidad Europea de Madrid ↗	Madrid, Spain	Master in Fintech and Blockchain	Oct 2023	Blockchain, Cryptocurrencies, Smart Contracts	Spanish/Online
Universidad Europea Miguel de Cervantes ↗	Valladolid, Spain	Master in Applied Blockchain: Programming, Taxation and Cryptoeconomics	Launched	Blockchain, Cryptocurrencies, Cyber Security	Spanish/Presence
University of Alcala ↗	Madrid, Spain	Master in Blockchain, Smart Contracts and Cryptoeconomics	Launched	Blockchain, Cryptocurrencies, Smart Contracts	Spanish/Online
University of Birmingham ↗	Birmingham, UK	MSc in Financial Technology	Launched	Blockchain, Cyber Security	English/Presence
University of Malta ↗	Malta	Master of Science in Blockchain and Distributed Ledger	Launched	Blockchain	English/Presence
University of Nicosia ↗	Cyprus	Master's in Blockchain and Digital Currency	Launched	Blockchain, Cryptocurrencies	English/Online and presence
University of the Italian Switzerland ↗	Lugano, Switzerland	MSc in Financial Technology and Computing	Launched	Blockchain, Cryptocurrencies, Cyber Security	English/Presnce
University of Vilnius ↗	Kaunas, Lithuania	Master in Computing	Launched	Cryptography	English/Presence
University Salamanca ↗	Salamanca, Spain	Master in Blockchain and Smart Contracts	Oct 2023	Blockchain, Smart Contract, Cryptography, Cryptocurrencies	Spanish/Presence
University Stirling ↗	Scotland	MSc in Financial Technology	Launched	Blockchain, Cyber Security, Cryptocurrencies	English/Presence
Vrije Universiteit Amsterdam ↗	Amsterdam, Netherlands	Master in Finance and Technology	Launched	Blockchain	English/Presence
Zigurat, Innovation & Technology Business School ↗	Barcelona, Spain	Global Master's in Blockchain Technology	May 2023	Blockchain, DeFi, NFTs, Cyber Security, Cryptocurrencies, Token-based Economy	English/Online

5.3 _Shortage of Commercial Talent

Hiring efforts of growing crypto companies have historically been focused on technical roles. However, as the industry matures, more and more companies reach a stage where they need to build commercial departments, leading to a higher demand for marketing and sales talent in this field. Research shows that while the demand is growing (this is backed by the results of the founder’s survey in this report, too. See Chapter 3), **the supply/talent pool is stagnant, leading to a severe talent shortage.**

To understand the market for talent in crypto, we looked at two clusters of overall 388 crypto and Web3 companies: early stage (pre-seed or seed, total funding >\$3M, last funding round min 2020, founded or HQ in Europe) and growth (series A to growth, valuation >\$10M & <\$600M, founded or HQ in Europe). Then, we analyzed their open roles according to the company page and aggregators of job sites. We compared this data with the European talent pool for Sales, Marketing & BD (LinkedIn: location Europe, Title: Sales/Marketing/Business Development/Partnerships).

The results show that growth-stage companies have an average of 1.05 commercial roles open, of which 70% are Sales/BD/Partnerships and 30% are Marketing. In contrast, early-stage companies have an average of 0.14 commercial roles open. This confirms the hypothesis that the growing demand for commercial talent in crypto comes mainly from companies entering advanced stages.

The ratio of total demand for talent to open roles is 1.6 for sales, 2.4 for business development, and 6.5 for marketing. This means that 38% of the open sales roles cannot be filled with the existing talent pool, with the same going for around 30% of Business Development roles and about 14% for marketing roles. This constitutes a severe shortage for commercial roles, as a ratio of 10 and therefore ~9% of roles not possible to fill would already show the beginning of a labor shortage.

Solutions

With growing demand and a severe lack of commercial talent, how do we solve this issue that could delay the further growth of the European ecosystem? Some potential solutions:

Import talent from other industries

- With close to no available talent pool in Sales & Business Development, the talent has to come from different sectors. Protocols in advanced stages like Polkadot/Parity reported to us good results from bringing over talent from payments and TradFi companies. However, candidates who want to make a move must bring curiosity and intellectual openness to succeed. In return, companies will need to provide extended on-boardings and support for the imported talent.
- Marketing is a special beast as the challenges of crypto are unique, with audiences and target markets varying for each company and very different channels and acquisition strategies to master compared to Web2 and other more traditional industries. Successful transfers have been seen from sectors with a similar approach to community growth, such as gaming & open-source. Marketing talent from these industries should be able to quickly adopt the required thinking if given the support and guidance from experienced Web3 and crypto marketers.

Grow talent internally

- Marketing has an existing talent pool that can be harnessed. The challenge is to develop this talent so they can also fill the companies' more senior roles.
- Sales & BD often have no relevant talent pool for sales & BD in-house. Candidates must likely come from adjacent functions such as operations, customer service, and recruiting.
- Early-stage startups may tap into volunteers who have already been promoting their product. One way is to create an ambassador program that incentivizes these already enthusiastic subsets of their community. Another way is to contract these individuals and try to develop their talents in-house.

Leverage Advisors

- A proven approach is adding strategic capabilities to an advisory function. Especially for marketing, it is essential to have a strong foundation as early as possible. At the same time, for Sales/BD, execution is a priority in the earlier stages, and strategic/foundational work becomes increasingly important as the company matures.

Showcase

To gain further perspective on the challenges and evolving strategies in attracting crypto talent compared to existing industries, we spoke with

Bertelsmann Investments. Bertelsmann is a European media giant with numerous print and digital outlets. It is also firmly committed to the emerg-

ing Web3-driven ownership economy. Note: Bertelsmann is invested in Greenfield Funds through its investment arm.

Martin El-Khoury ↗
Senior Director, Bertelsmann Investments



The emerging Web3 ownership economy can be challenging to grasp, as it introduces new business paradigms, consumption behavior assumptions, and technical peculiarities. Gaining access to individuals who understand these concepts can be challenging. Furthermore, corporate investment in Web3 talent is often limited due to the unexplained and volatile nature of the crypto world, which balances between undeniable disruptive utility and unfavorable prejudice.

One of the appealing aspects of crypto is its decentralized nature and precise incentive mechanisms for contribution, which encourage talented individuals to leave traditional labor markets and contribute to open communities. As a result, corporations often struggle to meet the salary and overall package expectations of top talent in the Web3 space.

On the other hand, developers, community builders, and entrepreneurs who join corporate structures can drive Web3 adoption on a large scale. At Bertelsmann Investments, we establish B3 – THE HUB, a platform connecting Web3 innovation with Bertelsmann Business units. By raising awareness about the technology's relevance, we aim to signal that Bertelsmann is a welcoming environment for Web3 talent.

6_State of European Crypto Regulation

6.1_tldr

Regulation and the general environment in which crypto projects operate are shaping to be decisive factors – especially concerning the competition between regional ecosystems in crypto. While the US executes regulation as enforcement, Europe takes the lead with a comprehensive and differentiated framework.

6.2_Regulation in the US

As a valuable point of comparison, we draw on the regulatory situation in the US, the most important crypto market to date. **The US currently does not have a regulatory framework for crypto.** All respective proposals have failed, partly due to a deadlock in Congress. As such, the authorities must rely on analogies to century-old rules and are under immense pressure to do something, really anything, in light of the recent US scandals, particularly FTX. The result is that the SEC and other supervisory authorities have come to rely on regulation by enforcement, as we have seen in the most recent enforcement actions. Such an approach is not comprehensive and **creates enormous uncertainty for market participants.**

Moreover, **enforcement in the US is currently a one-way street.** As SEC Commissioner Hester Peirce rightfully noted in her dissenting opinion, they are enforcing these unfitting rules, while at the same time not offering crypto companies the chance to comply as they factually cannot make it through the SEC's registration pipeline. This is why

- Kraken and others decided to shut down their US staking operations entirely once faced by enforcement instead of registering with the SEC;
- major exchanges such as Coinbase have not been able to register despite several official requests to the SEC to provide guidance or regulatory certainty on how to comply. As a consequence, Coinbase is facing enforcement actions now.

The downfall of Silvergate and Signature Bank emphasized this problem as crypto projects in the US lost their most important banking partners as well as tested banking rails for on- and off-ramping into fiat.

The last quarter saw additional uncertainty in the NFT market when a federal judge denied a motion to dismiss a case alleging that NBA Top Shots, which are collectible digital basketball cards, must be qualified as securities. Luckily, the judgment is not a final ruling on the case's merits.

6.3 _Regulation in the EU

Overview

Currently, the EU has a fragmented regulatory framework. Some countries, such as Germany and France, have dedicated crypto licensing regimes and at least some guidance from financial supervisory authorities. In contrast, other countries, such as Ireland, only have AML-related rules or no clear regulatory frameworks at all. Crypto projects have to navigate up to 27 regulatory environments within the EU.

This challenging background will improve significantly with MiCA (the European Market in Crypto) and the corresponding Transfer of Funds regulation. It will mark the **world's first comprehensive framework for crypto-assets by a major global jurisdiction**.

Once the transition periods have passed, the EU will have uniform rules for crypto-assets across its **27 countries** and an **economic zone of 450M citizens**.

MiCA aims to create a **uniform legal framework** across the EU for issuing certain crypto-assets and providing specific crypto services. In addition, MiCA introduces sector-specific regulations to prevent market abuse and market manipulation in crypto markets. Once a company has been granted a MiCA license in one country, it will be able to “passport” it and offer the licensed service throughout the entire EU crypto market, increasing the competitiveness of any European crypto projects. We believe this will be a **net positive for Crypto Europe**, particularly in comparison to the US.

Scope of MiCA

MiCA is intended to primarily cover fungible crypto-assets currently not covered by other EU financial services legislation, particularly MiFID II. Thus, tokens that qualify as securities (so-called security tokens) do not fall under MiCA but will (continue to) be treated as securities. Crypto-assets are defined under MiCA as “a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology”. This definition is inclusive and does, e.g., not require that the tokens are used as payment or for investment purposes.

The regulation distinguishes between the activities on the primary market, i.e., the issuance of crypto-assets, and the services on the secondary market, the so-called “crypto-asset services”:

- **Primary market**
Crypto issuers must issue a whitepaper containing detailed information on the issuer and the issued crypto-assets. While comprehensive, the necessary information obligations are less burdensome than for traditional securities prospect uses and must only be registered and not be approved before publication by a financial supervisory authority. As is the case under securities prospectus law, MiCA imposes civil liability on the issuer in connection with the whitepaper and also stipulates a non-systematic and potentially highly onerous right of revocation, subject to certain exceptions.
- **Secondary market**
Centralized crypto-asset service providers, most notably exchanges and custody providers, will be subject to authorization by a financial supervisory authority. These centralized service providers will have to demonstrate proper business organization and operation to obtain permission and will be subject to ongoing financial supervision.

For **stablecoins**, the regulation provides a clear regulatory path but also stipulates high bars for the management and composition of reserves, severely limiting the types of assets that can be used as reserves. The latter, combined with issuance limits based on transaction amounts of non-Euro stablecoins in the EU, may be prohibitive in many cases.

MiCA also expands the regulations against **market abuse** and prohibits **insider trading** and market manipulation with crypto-assets. The corresponding transfer of funds regulation implements the travel rule and other **AML** standards for crypto-assets.

All in all, these regulations will be a net positive for Crypto Europe. The EU recognizes that we need firm rules and regulation for centralized players. At the same time, it takes a **measured approach to token issuance**. The requirements concerning whitepapers are much lower than for traditional IPOs, and consider that these are often projects still in development.

DeFi and NFTs out of scope

Exceptions

- **DeFi**

One of the main aspects of MiCA is what it not covers. The EU openly admitted that it did not have sufficient information to do DeFi justice and needed more time before coming up with a comprehensive proposal for DeFi. The main problem in this respect is that the definition of a “decentralized” protocol is currently unclear. This is particularly important for early-stage projects that have not reached the level of decentralization at the time of the token generation event but have a clear roadmap to do so and move governance on-chain. It would be devastating if these early-stage projects first fall under the stricter rules for centralized players before changing into a – hopefully – more lenient ruleset for DeFi once they have grown.

- **NFTs**

There was a lot of discussion on whether MiCA covers certain types of NFTs. Statements from the commission indicate that they wanted to take a substance-over-form approach and thus included certain kinds of NFTs that were non-fungible in name only, particularly in fractionalization.

Outlook

The regulatory clarity provided by MiCA could attract capital and projects looking to issue tokens to the EU, which could be a substantial driver for economic growth and technological leadership. However, this depends on how MiCA will be **implemented and handled** by financial supervisory authorities. Despite several hundred pages of legislation, a lot of the details still need to be clarified by the supervisory authorities, most notably the European Banking Authority, in the next year with L2 legislation. One of the biggest risks is regulatory overreach or simple delay of necessary actions by individual financial supervisory authorities and regulators, particularly in light of the most recent scandals, with disastrous consequences for the entire industry.

Further, MiCA is **only a start**. The discussions on a MiCA II for DeFi have already begun. We will need a clear framework for DeFi that does it justice and does not take over unfitting regulatory approaches from TradFi. Further, the industry desperately needs fitting rules surrounding DAOs, NFTs, accounting guidelines, and identity solutions – without being burdened with overregulation that would strafe innovation at the core. **It is up to the industry to participate and educate in this debate to provide clarity and a workable regulatory regime for all market participants.**



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The foundation for a more robust and open web is being built right now.

Thanks for reading!

We appreciate your feedback, suggestions, additions or contribution ideas for the next State of European Crypto Report:

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