

2022

GLOBAL BLOCKCHAIN INDUSTRY TALENT INSIGHTS

FOCUS on Web 3.0





Core summary

“

Global blockchain talent growth is strong, but the growth rate of Chinese talent is relatively low.

The total global blockchain talent grew 76% year-on-year, with the U.S., India and China as the top three blockchain talent countries, of which, China's talent growth rate is relatively low, at 12%. With China's talent demand growth rate reaching as high as 60% year-on-year, China's talent growth rate is much lower than the talent demand growth rate.

”

“

Core talent requirements are shifting from the financial field to the technical field.

Within the global blockchain industry, financial talent makes up the highest proportion, with test engineers experiencing the fastest growth rate and technical talent having the largest gap in demand.

”

“

Talent tenure is short, turnover is high, and talent flow is mainly within the industry.

The average tenure of global blockchain talents is 1.2 years, and the overall picture of talent flow shows brief tenure and a high talent flow rate. The specific flow characteristics are that, except for the influx of talent from financial companies and technology companies into the blockchain industry, the flow of talent in the blockchain industry is primarily from within the industry and from peer companies.

”

“

Blockchain companies are increasing their education requirements and female talents are scarce. The ratio of men to women in the global blockchain field is about 8:2.

Professionals with a master's degree account for 40% of talent in the global blockchain industry. The overall education level is relatively high, and the more specialized the positions become, the higher the education requirements are. With the development of innovation in the blockchain industry as a whole and the introduction of blockchain-related subjects or courses to train professionals in universities around the world, the educational requirements for talent will be further increased and the competition for talent will be fiercer.

”

Core summary 01

Introduction: "Acceleration" in the age of the digital economy 03

Research methodology 04

Overview of developments in the global blockchain industry 05

The current state of talent in the global blockchain industry 18

Talent trends and advice 31

Publishing organizations 39

Legal notice 40



CONTENT



“Acceleration” in the age of the digital economy

Along with the intensive development of the digital economy, blockchain and other new generations of information technology innovation continue to make significant progress. While the metaverse and Web 3.0 concepts are developing at a high speed and gradually taking hold, blockchain technology and the cryptocurrency ecosystem are enjoying a sustained boom.

Blockchain is poised to rapidly develop and penetrate into all areas of the global economy as a digital economic revolution and next-generation information infrastructure, which will have an even wider and deeper impact over time. Major countries around the world are accelerating the development of blockchain technology, and blockchain is being deeply integrated into various fields globally, thus “accelerating” the reshaping of the structure of the global economy and changing the global competition landscape. Against this backdrop, new changes, opportunities and challenges will arise from industry shake-ups, organizational changes, market environments, corporate ecosystems and talent flow.

To help enterprises further grasp the opportunities that blockchain brings to organizational development, and get ahead of the game by gaining a deeper understanding of the current situation and changing trends of the blockchain industry and the organizations and talents involved, LinkedIn and OKX jointly carried out a study on organizational and talent development in the global blockchain industry based on LinkedIn’s global talent data and interviews with a number of enterprises. This study will explore the evolution of the global blockchain industry and key research trends, and analyze the current situation and future trends of global blockchain talent, which will provide valuable references for enterprises to understand the development pattern of the global blockchain industry, the requirements and characteristics of talent, and the establishment of core talent acquisition and talent pools.





This report is a joint research project conducted by LinkedIn and OKX, based on exclusive talent data from LinkedIn and covering more than 10 relevant sectors including blockchain, cryptography, quantum computing, distributed ledgers, Bitcoin, consensus mechanisms, consensus protocols, cryptocurrency, peer-to-peer networks, Ethereum, smart contracts, game theory, and decentralized applications.

The study also uses computer-related majors, open-source public chain R&D, consensus mechanisms, cryptography, Go, Rust, Ethereum 2.0, Polkadot, DApp development, Solidity, DeFi and other job keywords to filter the talent sample. Based on this sample, we conducted an in-depth analysis into blockchain industry talent, with research data samples covering 180 countries and spanning from January 2019 to June 2022.

Blockchain technology architecture and applications are primarily divided into an infrastructure layer, a protocol and application layer, and an input layer:

Infrastructure layer

- Consensus protocol
- Elliptic curve algorithm
- Cryptography
- Byzantine fault
- Cross-chain
- Capacity expansion
- Layer2
- Ethereum Virtual Machine, or EVM

Protocol and application layer

- decentralized finance
- automated market maker
- liquidity mining
- economic model
- data index
- permanent storage
- smart contract
- liquidity provider
- decentralized exchange

Input layer

- Private key
- mnemonic phrase
- Web 3.0
- decentralized identifiers
- nonfungible token
- Wallet
- data validation



Overview of developments in the global blockchain industry

- Blockchain emerged **with the birth of Bitcoin**.
- Blockchain technology has become the underlying infrastructure of **the current global technology revolution**.
- Blockchain technology continues to gradually expand its application scenarios with the optimization of **“Blockchain+”**
- Blockchain **continues to blossom** on the back of the metaverse, **Web 3.0 Waves** and global policy trends.






In recent years, in the context of the COVID-19 pandemic and geopolitical crisis the world is arguably becoming increasingly fragmented, and people are eagerly awaiting the next technological revolution to change the status quo. It is against this backdrop that blockchain technology — and indeed the crypto industry as a whole — were born and have grown. This has led to countries around the world accelerating the deployment of blockchain technology, and various industries have also accelerated the application and integration of this emerging tech.

The origins of blockchain: Bitcoin and blockchain

The concept of blockchain, an amalgam of cryptography, distributed systems and game theory, first appeared in the Bitcoin white paper titled “Bitcoin: A Peer-to-Peer Electronic Cash System” published by Satoshi Nakamoto on Nov. 1, 2008. In the paper the pseudonymous founder explained their new vision for digital currency and detailed the first decentralized, uncensored peer-to-peer cryptocurrency network with concepts such as proof-of-work, cryptography, hash functions and block rewards. On Jan. 3, 2009, the Bitcoin Genesis Block was created, which not only marked the creation of the first Bitcoins but also signified the official implementation of blockchain technology. At that time, blockchain was still just an untested laboratory concept, and Bitcoin was only referenced and discussed within a limited, niche community, generally focused on cryptography. People had not yet realized the potential of Bitcoin to become “digital gold,” nor the power of blockchain to revolutionize the digital economy.





The development of the blockchain industry

In recent years, the blockchain and cryptocurrency industry has made remarkable progress in spite of skepticism and criticism. In just over a decade, the cryptocurrency market has peaked at nearly \$3 trillion — more than 20% of the market value of gold — and Bitcoin has become a widely accepted global online currency by mainstream institutions. The thriving decentralized application, or DApp, ecosystem built in large part on the Ethereum blockchain, as well as on major emerging public chains, has become an integral part of many people's daily and working lives. In addition, the grand narrative of the metaverse and the concept of Web 3.0 are becoming emerging industries that a large number of internet and technology giants are scrambling to tap into, and provide a broader platform for entrepreneurs around the world. Blockchain technology, on the other hand, has become the underlying infrastructure for this global technological revolution.



01

In terms of industry size

according to IDC research forecasts, the global blockchain market size will reach a compound growth rate of around 48% from 2020 to 2024, while China's blockchain market size will grow at a compound annual growth rate of 54.6% from 2020 to 2025, ranking it first in the world.

¹ <https://www.idc.com/getdoc.jsp?containerId=prUS47617821>

² <https://611f77ad8863d.site123.me/project-background/china-market>

02

Looking at the industry value chain

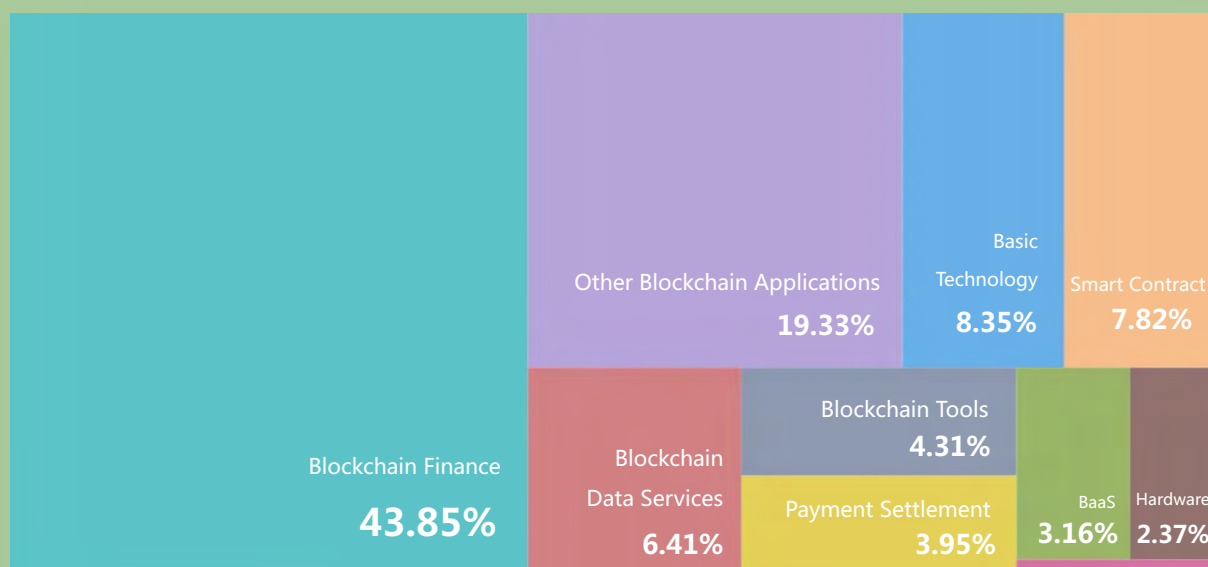
Thanks to favorable policies, technological progress and the continuous growth of the industry's scale, the global blockchain supply chain is gradually improving, and the underlying structure of the middle and lower segments of the chain will become increasingly clearer.

03

In terms of capital investment in the industry

The global blockchain industry has seen a slow upward trend in both financing events and amounts. Taking China's blockchain industry as an example, according to data analysis by ITJuZi.com, there were 868 investment and financing events launched in China's blockchain industry from 2013 to 2021, totaling 62.914 billion yuan.

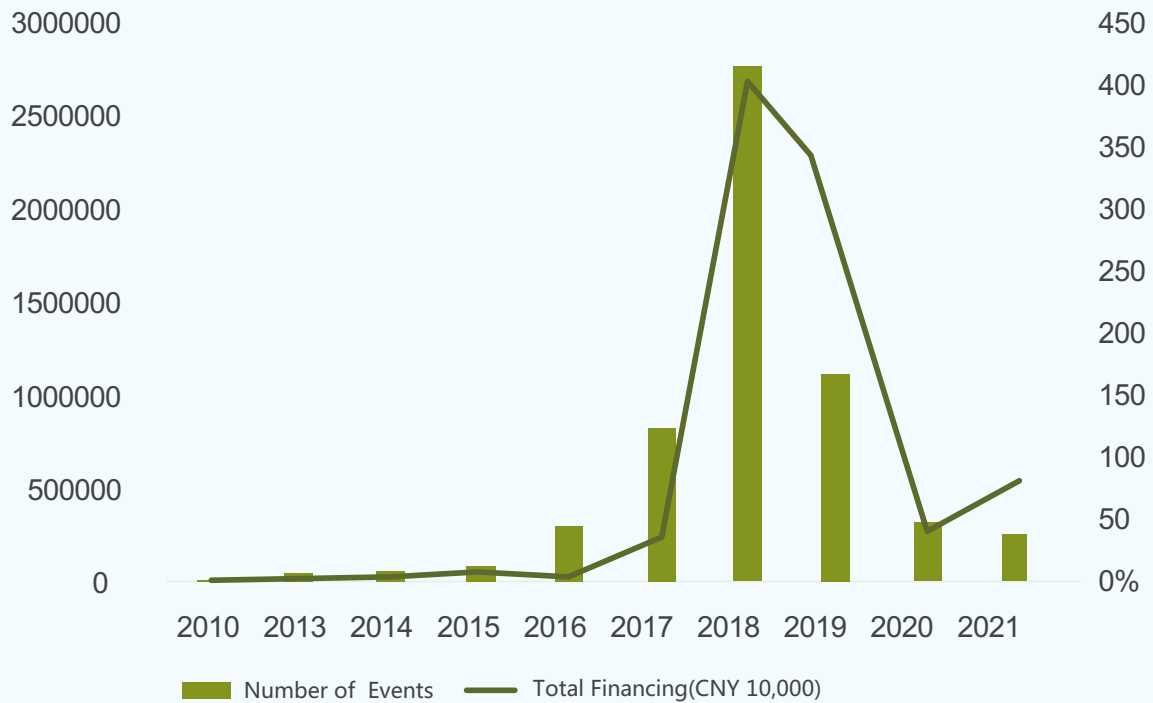
Distribution of China's blockchain supply chain



Source: Tuoluo Tech & Tuoluo Research, 2021 China Blockchain Industry Development Report



Blockchain and cryptocurrency industry development drivers



Source: ITJuZi.com, Tuoluo Research



Blockchain and cryptocurrency industry development drivers

Driving factor Key Notes

In July 2010, Mt. Gox, one of the world's first online Bitcoin exchanges, was officially established. The development of exchanges not only underpins the off-chain flow of Bitcoin and significantly lowers the barrier to participation but has also enabled Bitcoin to move away from the peer-to-peer negotiated pricing model and begin to have a fairer global market price.

The market is slowly coming into its own and the influx of capital saw the price of Bitcoin rise from \$0.68 to \$29.60 between April and June 2011, an increase of over 4,250% in two months. The mainstream media, such as Time Magazine and Forbes, began reporting on the nascent technology, and Bitcoin gradually moved into the public eye. Following this, cryptocurrency asset trading platforms, such as OKX, rose to prominence, further easing access to Bitcoin and other cryptocurrency exposure, with the overall liquidity of the market experiencing exponential growth. The addition and continued innovation of various strategic trading and finance tools also provided a solid guarantee for the healthy development of the market. On April 14, 2021, Coinbase successfully listed on NASDAQ, becoming the first publicly listed cryptocurrency trading platform. This landmark event symbolized a breakthrough in the mainstream acceptance of cryptocurrency platforms and markets.

As the number of global users increased and the difficulty of mining intensified, Bitcoin began to move from the CPU mining model to GPU mining, which drove the development and iteration of professional mining machines and contributed to unlocking blockchain's application potential in various industries

In January 2013, the world's first ASIC mining machine was successfully developed by a team led by Zhang Nangeng, and mining machine manufacturer Canaan Creative was established. Ebang International Holdings Inc. and Bitmain Technologies Ltd. were also founded and gradually rose to prominence around the same time. In April of the same year, the world's first large-scale mining facility was officially launched. From there, mining machine development and production and the pooling of the mine/pool hash rate entered the commercialization stage. The advent of the specialist mining age saw the price of Bitcoin rise from \$13 to \$1,153 in 2013, a cumulative increase of over 8,000%. In 2019, Canaan Creative successfully launched on NASDAQ, making it the first blockchain stock in the world and the first Chinese independent intellectual property rights artificial intelligence chip company to successfully IPO in the U.S., driving the continued development of the microchip industry. The continued growth of the Bitcoin network's hash rate provides a solid foundation for cybersecurity. In the years since, the Bitcoin network has fully proven the security and stability of blockchain technology and has become a global online consensus layer.

In December 2013, the first version of Ethereum, described as the "next-generation cryptocurrency and decentralized application platform," was launched, and the "Blockchain 2.0" era officially began

Ethereum is equipped with a smart contract feature that allows developers to build diverse upper-layer applications (DApps), greatly enhancing the scalability of the blockchain network and the potential of the cryptocurrency ecosystem. Moreover, the ERC-20 token standard, proposed by Ethereum in 2015, has significantly decreased the difficulty of financing cryptocurrency projects and lowered the threshold for participants to capture value, directly driving the subsequent cryptocurrency boom. In 2017, there was a dramatic climb in the number of tokens on the cryptocurrency market. That year also saw the launch of highly sought-after flagship public chain projects such as EOS and TRX, which joined forces to drive a significant expansion of the boundaries of the cryptocurrency ecosystem. Bitcoin also enjoyed one of the most closely watched bull markets since its inception, with prices topping \$19,896 and rising by over 2,450% over the course of the year. However, since then, as the upper-layer applications and cryptocurrency ecosystem continued to flourish, the Ethereum network, which was committed to becoming the "world's computer," was limited by its performance at the time and suffered frequent congestions, which led to the gradual breakdown of the ecosystem barriers. Based on the current situation, where the performance of infrastructure lags behind the speed of ecosystem development, Ethereum has started to move toward the ambitious goal of transitioning the network from a proof-of-work to a proof-of-stake consensus mechanism. High-performance public chains such as OKC, Avalanche and Solana have entered a high-speed development stage, while functional chains in niche areas such as Flow, Immutable X and Ronin have also started to gradually take off, and a multi-chain ecosystem with a more diversified architecture is gradually maturing. In this landscape, cross-chain projects and Layer-2 networks have both experienced a boom. According to OKLink data, the total value locked across all types of public chains exceeded \$200 billion by the end of 2021, with emerging public chains reaching a scale of \$10 billion. Cryptocurrency remains an incremental market with endless potential, but this cannot be achieved without the continued development of infrastructure such as public chains in terms of performance and scalability.

Driving factor Key Notes

Cryptocurrency assets, led by Bitcoin, have made a qualitative leap in mainstream acceptance, creating better market conditions for multiple applications of blockchain technology.

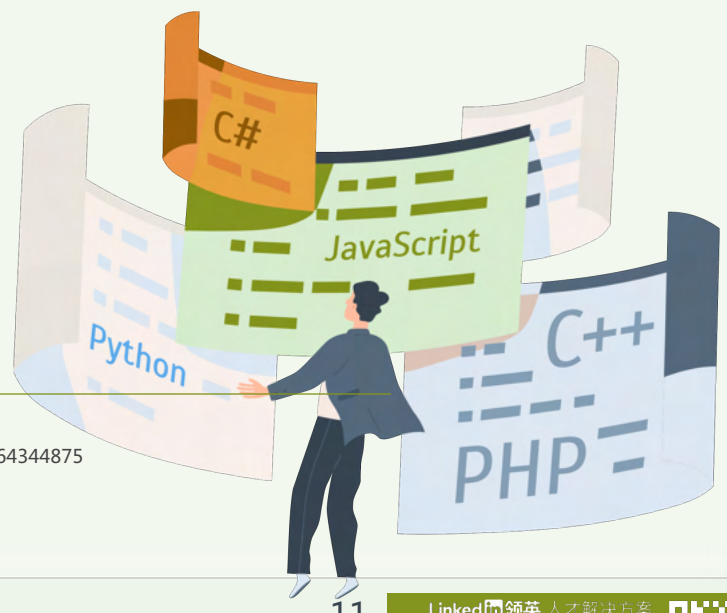
In December 2017, the Chicago Mercantile Exchange (CME) went live with Bitcoin futures, which became a defining event in Bitcoin's emergence as a mainstream asset, with breakthroughs in both retail holdings and institutional acceptance. Since then, public companies and mainstream institutions have begun to actively embrace cryptocurrency assets, with MicroStrategy, Tesla and Meitu, among others, announcing their purchase and ownership of Bitcoin. MicroStrategy, for example, was the main driver of market sentiment with its purchase of 34,614 Bitcoins in 10 installments over a six-month period. The Grayscale Bitcoin Trust (GBTC), launched by Grayscale, also began to increase its holdings of Bitcoin significantly. Official data shows that its managed Bitcoin total grew to \$11 billion by the end of 2020. GBTC became the main route for traditional Wall Street financial institutions to gain exposure to the leading crypto asset.

According to OKLink data, 42 institutions and companies worldwide held over 585,300 Bitcoins as of 2021, suggesting that institutional acceptance of crypto assets was on the rise. The Brazilian Securities Commission and the U.S. Securities and Exchange Commission have approved cryptocurrency-related spot and futures ETFs. In addition, El Salvador has announced the adoption of Bitcoin as legal tender in the country, marking the first time Bitcoin has entered the legal tender system at the national level. In 2022, more countries and regions, such as the Central African Republic, also announced the adoption of Bitcoin as legal tender.

While some cryptocurrency assets remain controversial, there is a worldwide consensus that blockchain technology plays an important role in technological innovation and industrial change

Blockchain is starting to spread into various fields such as digital finance, the Internet of Things, smart manufacturing, supply chain management and digital asset trading. Together with artificial intelligence, autonomous driving and other technologies, it makes up the "Fourth Industrial Revolution" and has become part of nations' infrastructure. A large number of countries and regions have begun to accelerate the deployment of blockchain technological development and launch relevant strategic plans, seeing it as a brand new way to transform industry. For example, the U.S. Commodity Futures Trading Commission, the U.S. Food and Drug Administration, the Department of Health and Human Services, the Defense Logistics Agency, and the National Aeronautics and Space Administration have all conducted research and made advancements in the role of blockchain technology in their systems. States such as Delaware, Illinois and Arizona have actively pursued the implementation of blockchain technology.

The Chinese government has also stated that it considers blockchain to be an important breakthrough in the independent innovation of core technologies. It has identified its key focuses as increasing investment, focusing on conquering a number of key core technologies, and accelerating the development of blockchain technology and industrial innovation.



³<https://www.xuexi.cn/lqpage/detail/index.html?id=11239538502964344875>

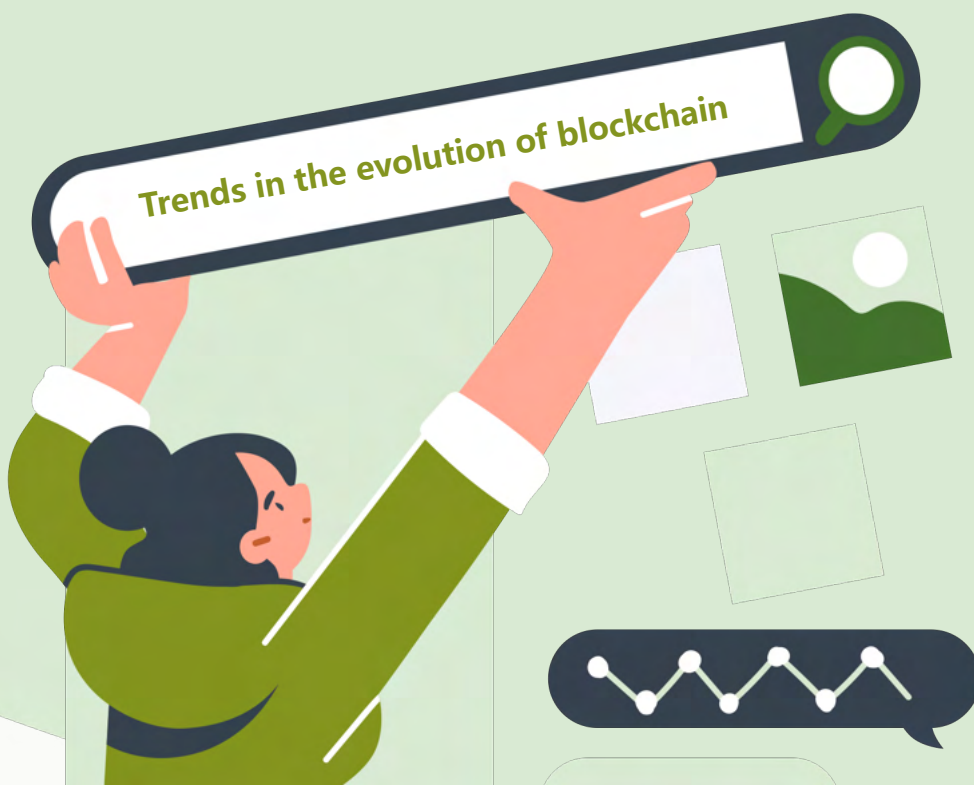
Trends in the evolution of blockchain

The blockchain industry saw accelerated growth on all fronts in 2021. Influenced by global quantitative easing, the price of Bitcoin climbed and hit a record high of \$69,000, placing it in the top 10 global asset markets, at one point surpassing Tesla in seventh place. Under the guidance of industry leaders, the cryptocurrency market has strengthened across the board, with each sector pushing the total market value past the \$3 trillion mark. In terms of financing, according to PADATA statistics, in 2021, a total of 1,351 investment and financing events took place in the global blockchain industry, with the total publicly disclosed financing amounting to \$30.51 billion, representing a year-on-year increase of approximately 884%. Over 80% of the funding events were for investments in early-stage blockchain protocols, indicating that the market is in a rapid development phase, with startups and innovative sectors emerging.

In terms of core sectors, with blockchain as the infrastructure, the three core sectors — metaverse, NFTs and blockchain gaming — have started to gain momentum in quick succession.

The year 2021 has been dubbed the year of the metaverse, a concept that originated from science fiction and has benefited from significant advances in virtual reality, 5G, artificial intelligence, blockchain and other related technologies, as well as the continued increase in demand for a digital existence in the midst of a global pandemic.

In March 2021, Roblox was successfully listed on the New York Stock Exchange, becoming the first publicly listed company involved in the metaverse. Since then, prominent technology companies such as Microsoft, Nvidia, Apple, Google, Tencent and ByteDance have announced the launch of metaverse-related hardware and software, and Facebook has even changed its name to Meta, placing all its eggs in the metaverse basket. Moreover, well-known investment institutions such as a16z, Goldman Sachs, Sequoia Capital and Tiger Global have also joined the trend. According to a report from researchers at OKX, it was predicted that by the end of 2021, the total market value of the metaverse sector would be around \$27.5 billion, showing great potential for growth compared to the \$14.8 trillion market value of traditional dot-com companies. Goldman Sachs predicted that up to \$1.35 trillion could be invested in the development of metaverse-related technologies over the next few years. Moreover, according to data from the “Metaverse Talent Development White Paper,” the number of new jobs posted in the metaverse sector is growing steadily, with increases of 13.59% and 14.60% respectively in 2019 and 2020 compared to the previous year, and a significant increase of 37.07% in 2021.





The explosion of the metaverse concept is also linked to the development of two other core sectors, NFTs and blockchain gaming, also known as GameFi.

NFTs, of nonfungible tokens,, which provide asset authentication and mapping solutions for the metaverse, named the 2021 Word of the Year by Collins Dictionary, with an 11,000% increase in usage. As the word of the year, NFT technology has made remarkable progress in both application scenarios and penetration of traditional areas. While NFT adoption continues to expand into music, film, social, gaming and financial sectors, the scenarios are becoming more varied. Moreover, NFTs have accelerated integration into traditional industries such as luxury goods, car manufacturing, FMCG, entertainment, cultural and creative industries, and food and drink. It has become a new way for brands to generate revenue. Leading companies such as Disney, Porsche, Coca-Cola and Burberry have already invested. According to a report by OKX Blockdream Ventures, the cumulative transaction value of NFT in 2021 was \$21.5 billion, an increase of over 20,000% year-on-year.

GameFi, on the other hand, relies on play-to-earn as its core application model, offering categories such as turn-based, sandbox, card and RPG games. It has produced a large number of quality projects with impressive results. For example, The Sandbox, a metaverse land project, has entered into close partnerships with over 60 companies including HSBC, JPMorgan, PwC and Gucci, and has even been named one of Time Magazine' s 100 most influential companies. OKX Blockdream Ventures reports that throughout 2021, the total number of GameFi projects continued to grow to 1,330, with the total transaction volume surpassing \$44.7 billion, the number of unique active wallets overtaking DeFi, and over 200 related funding events with a total funding amount of almost \$4 billion. Traditional gaming giants such as Ubisoft, Voodoo and WeMade have also started to actively deploy GameFi solutions to accelerate the integration of traditional gaming IPs with blockchain technology and cryptocurrency elements.



In 2022, the metaverse and Web 3.0 will continue to be the two main trends in the current market:



In addition to a steady stream of new organizations and top companies announcing their entry into the metaverse space, including Suning.com, Toyota, Budweiser, Hermès and Hyundai, the metaverse has also become included in national-level planning programs.

For example, Seoul's municipal government has released a five-year plan called the "Metaverse Seoul Basic Plan," in which it announced the creation of a three-phase metaverse administrative service ecosystem starting in 2022 and covering all levels of municipal government, including economy, culture, tourism, education and communication. The South Korean government has also said it will invest 17.9 billion Korean won to support content development and overseas expansion of metaverse companies, and plans to train 40,000 specialists in the metaverse field to catapult the country into the top five major countries in the global metaverse market. French President Emmanuel Macron said in an interview that he would create a "European metaverse" to ensure that Europe remains independent and at the forefront of the metaverse and Web 3.0, while Japan's prime minister has said that blockchain, NFTs and the metaverse are part of Japan's future strategic growth.

Web 3.0 appears to be even more ambitious than the metaverse.

The Web 3.0 narrative includes a number of very imaginative features and concepts designed to transform the relationship between humans and production, unlock enormous production capacity, and provide a broader platform for global entrepreneurs. In the future, Web 3.0 will be a major player in the areas of personal asset identification, value transfer, mutual value redistribution and organizational paradigm shift, and will reshape the online economy and existing business models.

With many years of experience as a leader in the blockchain industry and a strong tech gene, OKX believes that while Web 2.0 relied on two main sources of value — standalone value and network value — Web 3.0 offers an additional incentive to leverage value: token value.

Independent value is the value (from the base product only) that exists when no one else is using it on a platform. Embodied by solving pain points, network value is the value that exists on the platform due to use by other users on the platform and the value created on the platform through the activities and use of other users. The token value is the value generated from the protocol-related native tokens on the Web 3.0 platform. As protocol use cases increase, so does the value of the token associated with the protocol. Early users can benefit from the appreciation of their token. Token value therefore provides additional value leverage for the popularization of online effects.



At present, the growth of traditional investment markets such as the internet, manufacturing and real estate is slowing, and a large number of investment institutions are turning to Web 3.0, which offers unlimited possibilities. According to OKX, Web 3.0 startups received over \$173 million in investment in the first quarter of 2022. This year, over 15 venture capital firms have launched Web 3.0-specific funds with a value of over \$4 billion. For example, Sequoia Capital has launched a \$600 million fund dedicated to investment in Web 3.0-related startups, while a16z has announced that it is raising \$4.5 billion to establish a new fund, of which \$1 billion will be used to make seed investments in the Web 3.0 sector, among others.

In addition to traditional venture capital firms, native cryptocurrency venture capital firms such as OKX Blockdream Ventures, set up by OKX, are also keeping an eye on Web 3.0 and making related investments. OKX Blockdream Ventures, for example, has a presence in popular areas such as NFTs and GameFi in addition to the basic infrastructure, and has also stated that it is very optimistic about various niches such as storage, middleware and DID.



According to a report by Rapid Innovation, 94% of executives at Fortune 500 companies surveyed said they have plans for blockchain projects.

Respondents believe that blockchain technology has the potential to transform the global economy, while 89% of Fortune 500 executives believe that Web 3.0 innovations in the next decade will define business activity for the next 100 years. To keep up with the trend, companies are launching recruitment programs — for example, Spotify, the world's largest music subscription service, has announced that it is looking for senior back-end engineers to explore new technologies such as Web 3.0 as a way to identify the next growth opportunities, as well as experiment with building and running new and existing products. Video platform YouTube also has a job posting for a director of Web 3.0 product management, whose responsibilities include defining, communicating and executing the vision, strategy and roadmap for Web 3.0 for YouTube; exploring partnerships, open standards and opportunities for interoperability; driving the development of the broader creator industry; and coordinating product strategy. According to Finbold, Microsoft also plans to hire a director of crypto business development as a way of driving the artificial intelligence and emerging technologies business development teams to better build its future Web 3.0 strategies.

It is predicted that blockchain technology and the cryptocurrency ecosystem will certainly continue to explode as the metaverse and Web 3.0 concepts develop at a rapid pace and gradually take hold. As part of the digital economy revolution and a new generation of information infrastructure, blockchain will rapidly develop and penetrate all areas of the global economy.



The current state of talent in the global blockchain industry

- The total global blockchain talent grew 76% year-on-year, but China's talent growth rate is relatively low, at 12%.
- The U.S. ranks first in the world in blockchain talent, with India second and China third.
- The U.S., China and France are the world's top three countries in demand for blockchain talent.
- **Financial talent accounts for the highest proportion of talent, with the greatest demand gap for technical talent such as engineering and IT talent.**
- Quality assurance analyst roles have the highest talent growth rate, at 713%.
- Talent tenure is short, turnover is high, and talent flow is mainly within the industry.
- The ratio of men to women in the global blockchain field is about 8:2. Professionals with a master's degree account for 40% of talent in the global blockchain industry. Talent is generally highly educated.



The U.S., India and China are the top three countries in the world for blockchain talent, while China's talent growth rate is relatively low, at 12%

LinkedIn Talent Insights shows that the total number of people working in the blockchain industry among LinkedIn's worldwide members grew by 76% year-on-year as of June 2022. In terms of global distribution, the U.S., India and China are the top three countries in the world for blockchain talent, with the number of talents ranking in the top three globally. Among the top 10 blockchain talent gathering countries, Asia occupies four positions and Europe three positions. From the analysis of the number of talents, the total number of talents in the United States, which ranks first, far exceeds that of India and China. In terms of talent growth rate, among the top 10 blockchain talent countries, India and Canada have a relatively high growth rate of over 100%, 122% and 106%, respectively, followed by Singapore at 92%, while China has a relatively low growth rate of 12%.

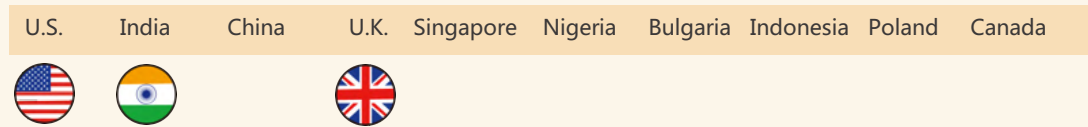
Top 10 countries for global blockchain talent

TOP1	TOP2	TOP3	TOP4	TOP5	TOP6	TOP7	TOP8	TOP9	TOP10
 U.S.	 India	China	 U.K.	Singapore	Nigeria	Bulgaria	Indonesia	Poland	Canada



Data source: LinkedIn Talent Insights

Talent growth rate of top 10 countries for global blockchain talent



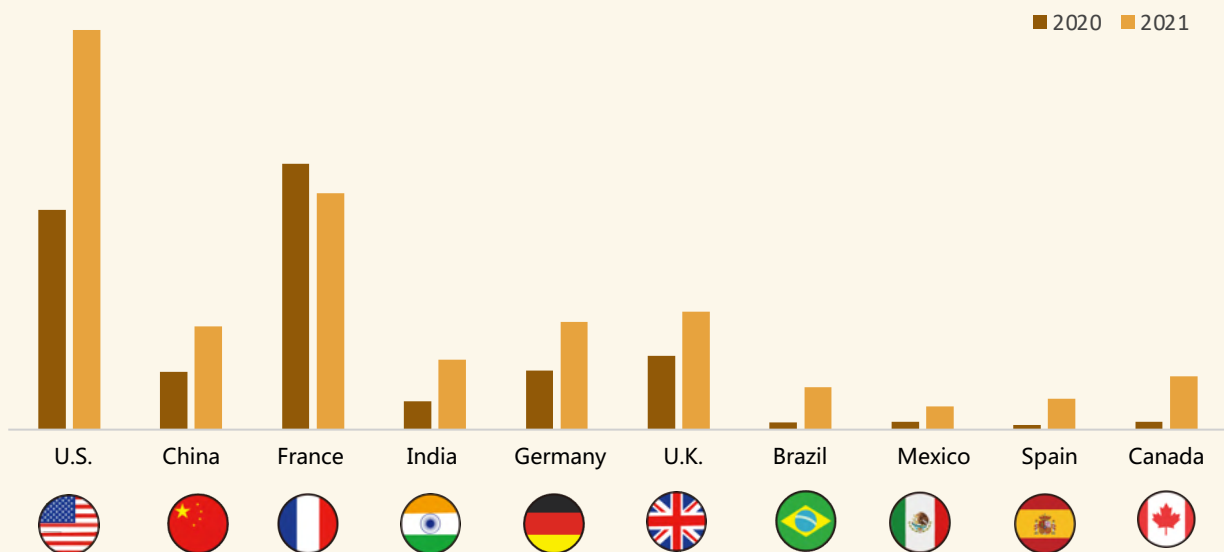
Data source: LinkedIn Talent Insights



The U.S., China and France are the world's top three countries in demand for blockchain talent and talent demand for core talent countries continues to be strong

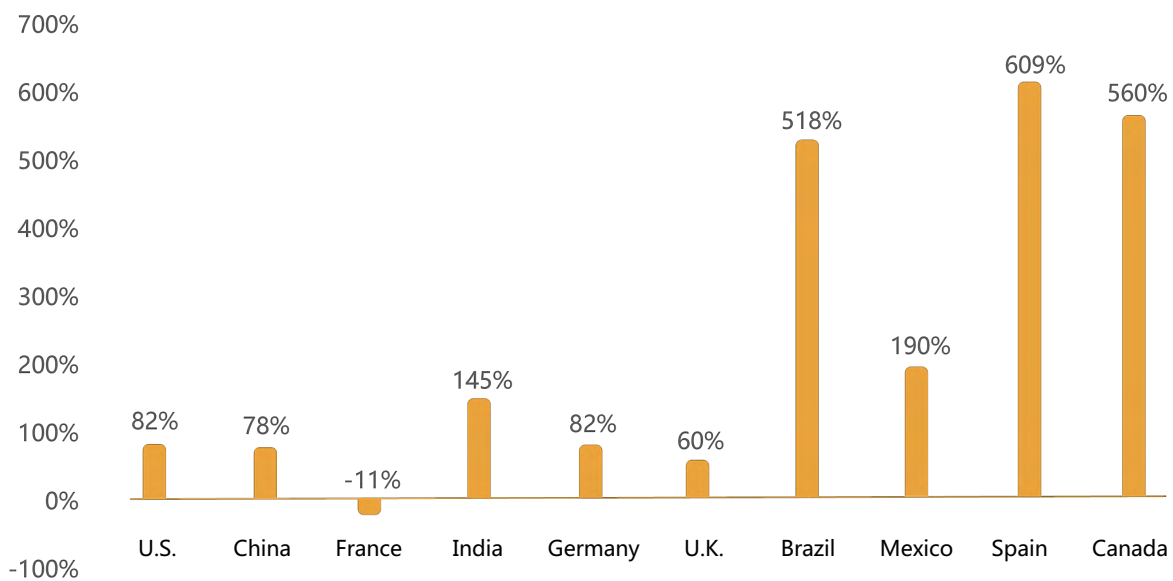
In terms of job postings, talent demand is mainly concentrated in the United States, China, France, India, Germany and other countries. It is worth noting that among the top 10 blockchain talent countries, the blockchain job postings in the United States, China, India, the United Kingdom, Singapore, Canada and other countries are multiplying in 2021. Among them, Canada has the highest growth rate of 560%, followed by Singapore (180%) and India (145%). The United States and Germany are growing at 82%, and China at 78%. LinkedIn Talent Insights show that these countries continue to maintain growth in demand for talent based on the number of job postings in the first half of 2022.

**Top 10 global blockchain talent demand countries in 2022
(2020–2021 change in job postings)**



In terms of the Chinese market, thanks mainly to China's championing of "blockchain as an important breakthrough in independent innovation of core technologies and accelerating the development of blockchain technology and industrial innovation" and the implementation of a series of initiatives, blockchain has officially moved into the public eye and become a consideration for capital, the physical economy and public opinion. The increase in the number of blockchain enterprises and investment in blockchain has accelerated the demand for blockchain talent. In the second quarter of 2020, the Ministry of Human Resources and Social Security announced blockchain as a new occupation, which also further fueled the demand and shortage of talent in the blockchain field.

2021 job posting YoY growth rate for global top 10 blockchain talent demand countries



LinkedIn 领英 人才解决方案

Data source: LinkedIn Talent Insights



Finance talent represents the largest proportion of the global blockchain industry, while quality assurance analyst talent is also growing at the highest rate

In terms of the composition of talent in the global blockchain industry, the top five types of talent are finance, engineering, business development, information technology, and sales. Of these, finance talent is the most sought-after in the global blockchain industry, with the highest proportion of people, at 19%. Engineering talent accounts for 16%, while business development, IT and sales talent are all at a similar level at around 6%.

Composition of the top five global blockchain talent types

TOP5	Talent Type	Percentage
1	Finance	19%
2	Engineering	16%
3	Business development	6%
4	Information technology	6%
5	Sales	6%



Data source: LinkedIn Talent Insights

Specifically, among the top five global blockchain talents, the most popular occupations are cryptocurrency traders, software engineers, analysts, support analysts and account managers.

Top 10 occupations in the global blockchain industry for the top five talent types

TOP10	Finance	Engineering	Business development	Information technology	Sales
1	Cryptocurrency trader	Software engineer	Analyst	Support analyst	Account manager
2	Trader	Senior software engineer	Owner	Security engineer	Salesperson
3	Foreign exchange trader	Bitcoin miner	Chief executive officer	Team lead	Sales manager
4	Anti-money laundering analyst	Staff software engineer	Business development manager	Data analyst	Account executive
5	Trading specialist	Blockchain developer	Entrepreneur	Support engineer	Sales and marketing specialist
6	Investment specialist	Engineering manager	Business development specialist	Business intelligence consultant	Product specialist
7	Day trader	Cryptologic technician	Managing director	Technical support engineer	Sales specialist
8	Financial analyst	DevOps engineer	Co-founder	System engineer	Senior account manager
9	Financial trader	Full stack engineer	Founder	Data engineer	Sales director
10	Financial manager	Frontend engineer	Senior analyst	Information technology specialist	Seller



Data source: LinkedIn Talent Insights

In terms of talent growth, the top five fastest growing global blockchain talent roles are quality assurance analyst, cryptologic technician, compliance specialist, artist, and support analyst. Quality assurance analyst showed the highest growth rate from June 2021 to June 2022, at 713%, with cryptologic technician and compliance specialist in second and third place, respectively, both growing at over 250%. The fastest-growing roles reflect that, with the progress of blockchain technology research and its penetration, integration and development in various industries and fields, the blockchain industry is transitioning from being highly financial to being highly technical in nature. It will fully utilize the combination of technical and financial attributes of blockchain to gradually develop into an important part of the digital economy.

Top five growing talent types

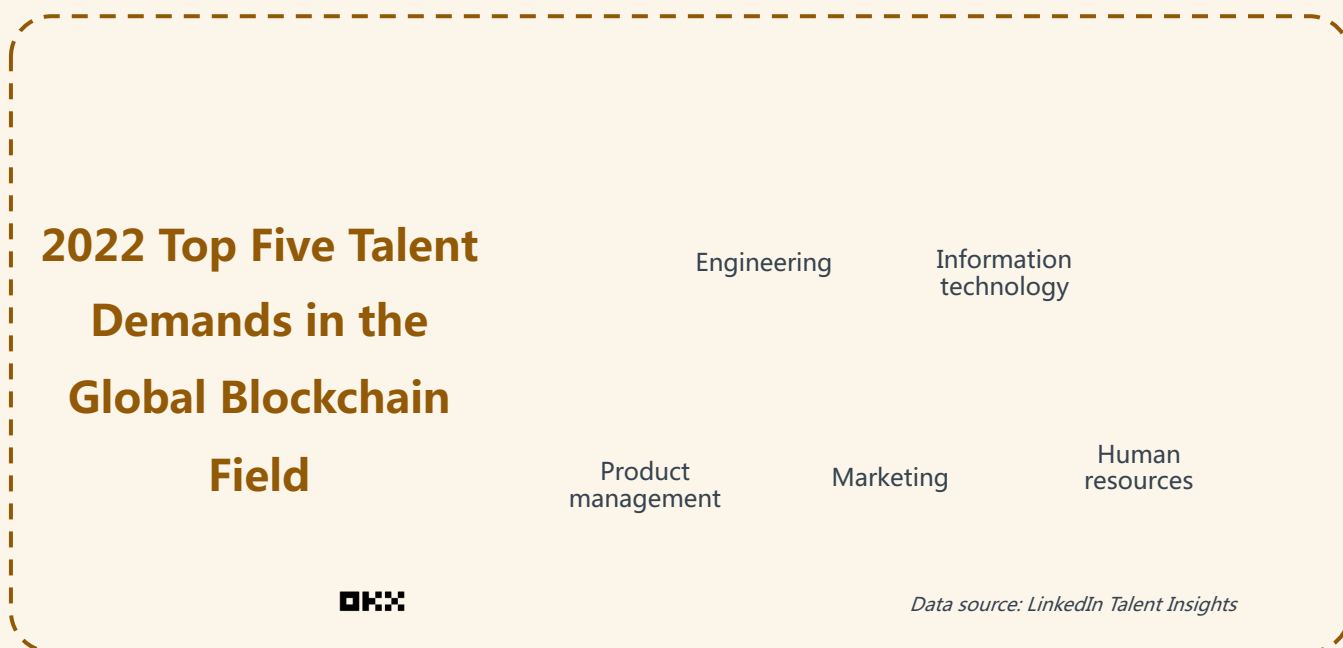
TOP5	Talent Type	Growth Rate
1	Quality Assurance Analyst	713%
2	Cryptologic Technician	350%
3	Compliance Specialist	253%
4	Artist	250%
5	Support Analyst	237%



Data source: LinkedIn Talent Insights

With engineering and information technology talent leading the way, there is high demand for and large shortage of technical talent in the global blockchain industry

There is currently a large gap in demand for technical talent in the global blockchain talent pool. Up until June 2022, in terms of job postings, engineering talent tops the global demand for blockchain talent, followed by IT talent. Product management, marketing and human resources are close behind. The finance category, which currently ranks first in terms of blockchain talent, is only sixth in terms of hiring demand. There is a large gap in demand for technical talent in the blockchain talent pool.



The main reason behind the high demand for technical talent is that the blockchain industry is at an early stage of development and a large amount of infrastructure needs to be built. At the same time, the blockchain industry itself is highly technological in nature, and scientific and technological progress cannot be achieved without technical talent.

OKX, for example,

has been building its team at a steady pace. Given its technology-driven corporate values, product and technical positions have been the focus of its recruitment. OKX will spend more time and effort to reserve quality technical talents for the development of OKX Web3 Wallet, a Web 3.0 entry-level application that is a one-stop decentralized platform for global users. OKX also allocates a certain amount to growth and operational talent as well as functional support specialists based on business development in each region.

As the fifth most sought-after type of talent in the global blockchain industry, the human resources type of talent is also indicative of the demand for talent in the blockchain industry and the active talent market.

The analysis of the data also found that different countries and regions show significant differences in the types of talent in demand in the blockchain industry. Take Singapore and Hong Kong as an example: In Singapore, the focus is on hiring product managers and software engineers, while in Hong Kong, the focus is on hiring product designers, UX writers, software engineers and product managers.

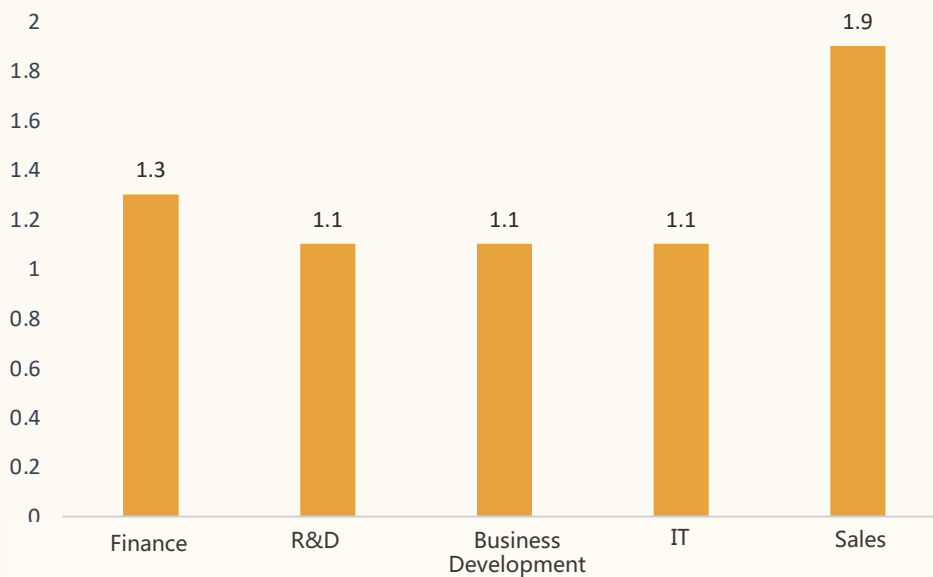
Furthermore, in terms of talent salaries in the blockchain industry, salaries for blockchain specialists are soaring as demand far exceeds supply. According to Glassdoor, the average base salary for a blockchain developer in the U.S. is \$91,715 per year. As far as the Chinese market is concerned, according to the “Beijing Human Resources Market Salary Status Report 2021” published by the Beijing Municipal Bureau of Human Resources and Social Security in November 2021, in the salary ranking of 30 new occupations, blockchain engineers and technicians ranked highest, with an average annual salary of 487,106 yuan. The “Blockchain Industry Talent Development Report” published by the Talent Exchange Center of the Ministry of Industry and Information Technology in December 2021 also shows that on the whole, annual salaries in the blockchain industry are rising year by year, and rank first in horizontal industry comparison with obvious competitive advantages. Looking at the salaries for different jobs, the salaries for core R&D positions were the highest. The salary age distribution was spindle-shaped, with talents in the 30–50 age group receiving the highest salaries in the industry. Furthermore, the average annual salary level of blockchain industry talents in key cities such as Beijing, Shanghai, Guangzhou and Shenzhen was significantly ahead of that of other cities on the whole.

⁵<https://www.blockchain-council.org/blockchain/demand-gap-for-blockchain-talent-requires-top-rated-education/>

Talent tenure is short, turnover is high, and talent flow is mainly within the industry

Global blockchain talent mobility is characterized by short tenure and high talent turnover. LinkedIn Talent Insights indicates that the average tenure of blockchain talent globally is 1.2 years. The average tenure of the top five blockchain talent types also varies, with finance talent averaging 1.3 years, engineering talent averaging 1.1 years, business development talent averaging 1.1 years and sales talent averaging 1.9 years. In addition, the top five global blockchain talents in demand are product talents and marketing talents with an average tenure of 1.1 years.

Average tenure of the top five talent types in the global blockchain industry (in years)



Leading and established crypto trading platforms like OKX are still steadily moving forward with their talent expansion plans. According to official reports from OKX, the platform will increase its global workforce by 30% over the next year, bringing the total number of employees to 5,000.

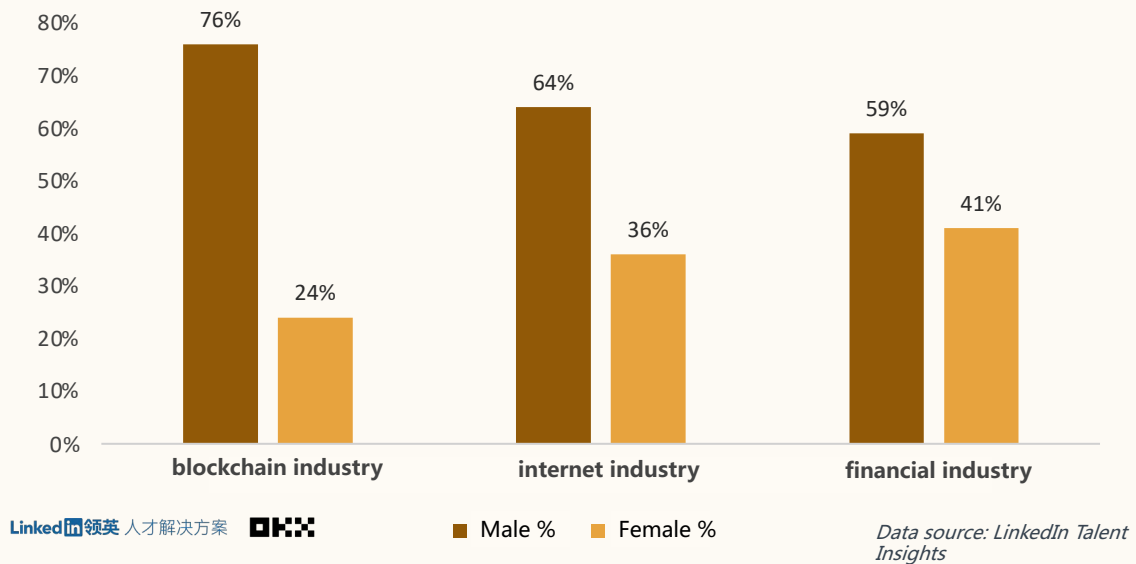
The HR Director of OKX said: "The number of applicants for jobs worldwide in April 2022 was 18,800, and in May it was 18,900, so numbers are increasing. There is currently a relatively rich variety of talent out there in the market, but not many people specialize in blockchain. There is still a shortage of talent specialized in development, and design talent with good aesthetics and crypto product focus is scarce."

Meanwhile, in terms of specific flows, in addition to the influx of talent from financial and technology companies into the blockchain industry, for example, there has also been an influx into traditional financial firms such as Goldman Sachs, JPMorgan and HSBC, and into technology companies such as Google, Microsoft and Facebook. The global talent flow stream in blockchain is dominated by intra-industry flow. LinkedIn Talent Insights suggests that since 2021, talent has mainly been flowing between blockchain companies such as Coinbase, Crypto.com, Gemini and Ripple.

The ratio of men to women in the global blockchain field is about 8:2. With 40% of talent holding a master's degree, talent is generally highly educated

LinkedIn Talent Insights suggests that the percentage of female blockchain practitioners is much lower than that of male practitioners, at 24% and 76%, respectively, as of June 2022. Compared with the internet and finance industries, the percentage of women in blockchain is relatively low. Even though the blockchain industry and enterprises are actively advocating to attract excellent female talents, overall, female talents in blockchain are scarce.

Percentage of male and female employees in the global blockchain industry, internet industry, and financial industry



Take OKX for example: According to the official recruitment series, the platform has been adhering to the principle of recruiting regardless of race or gender, and is committed to creating a level playing field for everyone. Currently, about 40% of the global team are female employees, higher than the industry average. OKX has always attached great importance to female employees' career development and will attract more aspiring female talents to join in the future to jointly promote the development of blockchain and Web 3.0.

While the global blockchain industry has the highest proportion of bachelor's degree holders at 59%, master's degrees account for 40% of the total, with relatively high qualifications overall. The top 10 schools in the global blockchain talent ranking are all world-renowned institutions.

Top 10 graduating institutions for global blockchain talent

- University of California, Berkeley
- National University of Singapore
- New York University
- Stanford University
- University of California, Los Angeles

- University of National and World Economy
- Sofia University St. Kliment Ohridski
- The University of Hong Kong
- Harvard University
- The Chinese University of Hong Kong



Data source: LinkedIn Talent Insights

Talent trends and advice

- The contradiction between the growth of the talent pool and the demand for talent has increased, and the continued surge in demand for talent has become inevitable, so companies should actively work on building a global talent resource bank to create a strong talent pool.
- Technical talent is at the core of the industry's focus and demand, so it is important to strengthen the attraction of talent at home and abroad and to properly nurture the skills and potential of core talent.
- With high talent turnover, organizations need to refresh their corporate vision and values as soon as possible to inspire employees with a sense of ambition.
- Blockchain companies are increasing their academic requirements for talent, and organizations should redefine talent and innovate talent standards to keep up with the times.



The contradiction between the growth of the talent pool and the demand for talent has increased, and the continued surge in demand for talent has become inevitable, so companies should actively work on building a global talent resource bank to create a strong talent pool.

With the innovative development of blockchain technology and the momentum of the metaverse wave, the breadth and depth of blockchain applications, penetration and integration in various fields will be further strengthened. Governments and regulators are also increasing their encouragement and support for blockchain technology and its R&D applications, and more and more companies will commit themselves to further experimentation. The continuous surge in demand for talent has become inevitable, which will intensify the fierce competition in the blockchain talent market, where the existing talent pool and growth are both insufficient.

Research by the Blockchain Council suggests that while blockchain technology is rapidly maturing, the growing shortage of blockchain specialists is a well-documented concern around the world. The demand for blockchain developers is currently at an all-time high. Leading companies, including Google, Microsoft and IBM, as well as a number of start-ups, are accelerating their use of blockchain technology and are all struggling to find sufficient talent. Blockchain Academy research shows that global demand for blockchain technology talent is growing at an annual rate of 300–500%, and as blockchain technology and industry development gradually mature, this will bring new job openings in addition to increased demand for all existing talent types.

Therefore, in order to avoid organizational capabilities limiting organizational business development, companies should broaden their focus, actively pay attention to changes in the talent market, and build a global talent pool to keep a good reserve.

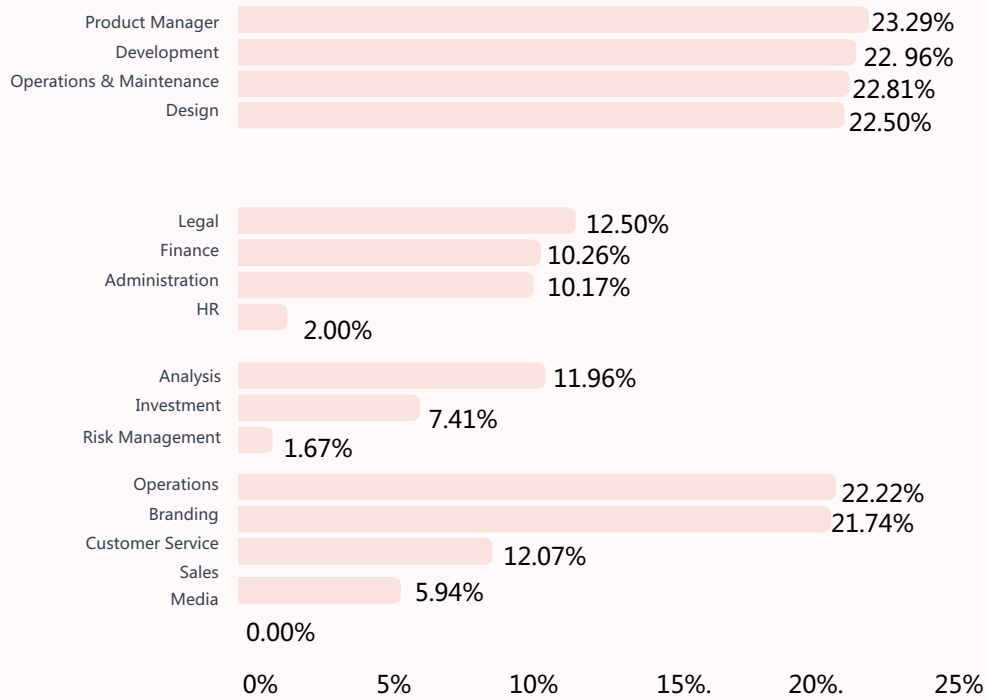
⁶The Blockchain Academy, 2021 Global Blockchain Employment Report

Technical talent is at the core of the industry' s focus and demand, so it is important to form a hybrid talent team and properly nurture the skills and potential of core talent.

Blockchain has already proven to be a key technology for solving complex and prospective problems, and enterprises' investment in blockchain technology directly translates into a demand for blockchain talent and skills, with a growing number of studies and data confirming the growing trend of enterprises' demand for blockchain specialists, especially technical talents.

At the same time, as the industry develops toward maturity, enterprises are attaching greater importance to the establishment of the underlying ecosystem and product innovation. Following the relatively infant stage of uncontrolled growth, the blockchain industry is now focusing more closely on the construction of fundamental technical facilities, prompting enterprises to attach greater importance to technical talents with systematic knowledge of blockchain technology and management capabilities. The demand for related technical talents has become increasingly stronger, in particular for comprehensive talents with high education, strong self-motivation and curiosity about new things, as well as technological management talents. The "2020–2021 China Blockchain Education and Talent Development Report" released by 01Caijing also indicated that technical management talents are "highly sought after," with at least one in five people being hired for management roles.

Percentage of managers in different roles in the blockchain industry



Source: 01Caijing, 2020–2021 China Blockchain Education and Talent Development Report

Given the decline in the growth rate of talent in the global blockchain industry and the prioritization of increasing reserves, organizations should fully focus on their target talent and build hybrid talent teams to inspire vitality. At the same time, they should adapt to local conditions and take into account actual conditions to strengthen existing core talent skills training and uncover potential to fill the talent skills gap and talent shortages.



With high talent turnover, organizations need to refresh their corporate vision and values as soon as possible to inspire employees with a sense of ambition.

As a flourishing, pioneering industry influenced by the characteristics of the whole blockchain industry, technological innovation and application, as well as policies, the blockchain field is characterized by relatively short tenures and frequent talent flow. With the blurring of industry boundaries and the hybrid office model gradually becoming the norm, employers' competition for quality talent will become more intense and frequent talent flow is inevitable. Companies should actively refresh their corporate vision and values, and at the same time create a good working environment to strengthen employees' sense of identity and motivation, so as to fully inspire their commitment and promote their well-being. This will boost talent attraction and retention, and facilitate healthy corporate development.

For example, OKX's core hiring decision criteria has the right idea, being able to deliver and being motivated by a vision. On the one hand, given that the industry is in its early stages, only talents who are truly curious and optimistic about the industry and willing to understand it in depth can motivate themselves to go further. On the other hand, the blockchain industry has a lot of money and is full of temptations and challenges, so talents with the right mindset and true Web 3.0 ideals are highly valued in this environment.



Blockchain companies are increasing their academic requirements for talent, and organizations should redefine talent and innovate talent standards to keep up with the times.

Although today 40% of talents in the global blockchain industry hold a master's degree, as blockchain technology and the new financial technology system built around it begin to be gradually recognized and accepted, more and more universities around the world are starting to offer blockchain-related disciplines or courses to nurture specialized talents. The more specialized the position is, the higher the educational requirements will be. In the future, with the increase of specialized talents and the further development of blockchain technology and its applications, the market competition will become more and more fierce, and the education requirements, which are an important indicator for companies to screen talents, will become higher and higher.

Blockchain subject offerings at China's double first-class universities (as of the end of October 2021)

Time of Release	Released By Course	Name
2016	Central University of Finance and Economics	Blockchain and Digital Currency
2017	Tongji University	Blockchain Talent Training
2018	Zhejiang University	Blockchain and Digital Assets
2018	Sun Yat-sen University	Principles and Technology of Blockchain
2018	Northeastern University	Technical Principles and Development Practices of Blockchain
2018	Xidian University	Silicon Valley Campus-Master of Science in Information Systems
2018	Beijing Institute of Technology	Blockchain Technology Credit
2018	Beihang University	Principles and Technology of Blockchain
2018	Xi'an Jiaotong University	Principles and Applications of Blockchain
2018	China University of Political Science and Law	Blockchain and Digital Economy
2018	University of International Business and Economics	Blockchain+Course Education
2018	Shanghai University	Series of Courses on Blockchain Technology
2018	Tianjin Medical University	Applications of Blockchain
2018	Shanghai University of Finance and Economics	Training on Practices and Applications of Blockchain
2019	Tsinghua University	Blockchain and Cryptocurrency
2019	Harbin Institute of Technology	Blockchain Technology
2020	University of Science and Technology of China	Blockchain Technology Foundation
2020	Yunnan University	Joint Blockchain Course
2021	Renmin University of China	Fintech and Blockchain

Source : Huadayun Chain, Tuoluo Research

Taking into account the current situation of short tenures and high talent flow in the blockchain industry, companies should keep pace with the trends, grasp the changes and trends in the industry and market development, redefine their talent teams, and update their talent standards in a timely manner — from strict academic and skill requirements to flexible attributes such as character and integrity — so as to lay a good talent foundation for the future and continuously build core competitive strength to cope with uncertainties.

Case: Web 3.0 talent for OKX: Enthusiastic and disciplined people with ideas and the skills to implement them

The development of a company is a process of adapting to the market environment, and the talent standard is the supporting force that shapes the development of the company.

Therefore, the selection of talent actually depends on the company's assessment of what the fundamentals of the industry are.

OKX's fundamental judgment on the development of the industry is based on three main points:



1. In terms of future development, blockchain, as the underpinning technology, is still in its early stages of development and there is huge scope for future development. This huge space also calls for keeping an eye on the industry to identify and seize development opportunities, so we need people who are curious and passionate about Web 3.0 and who are all-in to build for the long term.

A passion for building the industry is a much scarcer asset than blockchain knowledge and skills.

2. As the underlying infrastructure of Web 3.0, the current development of the blockchain industry not only requires comprehensive, infrastructure-based work, but also requires keeping a keen eye on technology and the industry, and providing value to users by offering superior product technology services, so that the more transparent and fairer value of blockchain can be brought to more people.

This is why OKX is looking for people who are not just spectators, but people who have ideas and the skills to deliver them, who are willing to get down to work, and who are committed to the work they do. Only in this way can the value of the blockchain be delivered to users through one specific product and service to make their lives better.

OKX attaches great importance to unearthing and nurturing those talents. For example, our talent competency model attaches great importance to the dimension of innovativeness based on industry insights, and will identify mission-driven talents through management mechanisms such as talent inventory and promotion. Furthermore, as one of the first blockchain companies, we are history itself, and will help talents refresh their knowledge together during onboarding training. We will also help them to understand the development of the industry and the context of career development, and expand their perspectives using simple and efficient methods such as AMA.

3. Looking at the current situation, the industry has gradually entered the mainstream from its infancy, with more technical and technological financial talents gradually coming in from the geek era. However, it is still dominated by traders, which has also created the illusion of "overnight wealth," with people rushing to "cut corners" and "make a quick buck."

This is the current state of the industry and the disorder we need to face up to. The only way to gain ultimate recognition of our value is to resist temptation and insist on doing the right thing.

However, our working principles cannot be observed in the short term. As the saying goes, "a person's actions can be seen by observing the smallest details." We believe that refined teams and organizations are the most valuable assets of a company, and we therefore always attach great importance to the establishment of internal legal controls and to the use management concepts such as fundamental laws to clarify the company's concept of adaptation to the industry and the individual's concept of adaptation to the organization.

Academic qualifications and professional skills are a plus, but they are not essential to OKX's talent criteria; nor do we need people who are only educated but not capable, only skilled but not principled, only passionate but not resilient.

We want to share our dreams with people who are passionate and principled, who have ideas and the ability to execute them, and who will work with us to build a more transparent and fairer world.



Publishing Organizations

LinkedIn 领英 人才解决方案

LinkedIn, the world's leading professional networking platform, was founded in 2003 and is headquartered in Silicon Valley, USA. LinkedIn strives to create economic opportunities for all 3 billion members of the global workforce, and in turn to produce the world's first economic map. As of June 2022, there were more than 850 million LinkedIn members worldwide, spanning more than 200 countries and territories. Of these, the total number of members in China has exceeded 57 million. LinkedIn officially announced its expansion into China in 2014 and continues to provide quality localized products and services to both individual members and corporate customers. In December 2021, LinkedIn officially launched its new product "LinkedIn Careers" in mainland China, to continue its efforts in the Chinese market. "LinkedIn Careers" continues to help users connect with career opportunities and help employers find the ideal candidates, using the same features as LinkedIn Job Search and Recruiter. At the same time, LinkedIn continues to bring value to companies and organizations through its talent and marketing solutions, helping Chinese companies grow internationally in terms of both talent and brand, thus better connecting them with global business opportunities.



OKX is a leading crypto trading app, and a Web3 ecosystem. Trusted by more than 20 million global customers in over 180 international markets, OKX is known for being the fastest and most reliable crypto trading app of choice for traders globally. Since 2017, OKX has served a global community of people who share a common interest in participating in a new financial system that is designed to be a level playing field for everyone. We strive to educate people on the potential of crypto markets and how to trade responsibly. Beyond the OKX trading app, the OKX Wallet is our latest offering for people looking to explore the world of NFTs and the metaverse while trading GameFi and DeFi tokens.

Legal notice

The intellectual property rights of LinkedIn and OKX' s 2022 Global Blockchain Industry Talent Report -Focus on Web 3.0 (hereinafter referred to as the "report") and any related rights derived are owned by Beijing LinkedIn Information Technology Co., Ltd. (hereinafter referred to as "LinkedIn") and OKX. This report is only available for download by individuals and companies from the official LinkedIn and OKX channels, or from partner channels approved by LinkedIn and OKX (collectively referred to as "authorized channels"). No individual or company may quote the content of the report for commercial purposes, publicize or share the report on channels other than those authorized, or provide downloads of the report to the public or any other third party without the permission of LinkedIn or OKX. LinkedIn and OKX will pursue their legal responsibility if their rights are violated in any way. The contents of this report are for reference only, and LinkedIn and OKX are not to be held responsible for the outcome of any business decisions made based on the content of this report.



Contact us

LinkedIn 领英 人才解决方案

☎ 400-062-5229

✉ ChinaLTS@linkedin.com



🌐 <https://www.linkedin.com/company/okxofficial/>

✉ pr@okx.com



To learn more, scan the QR code to follow LinkedIn's WeChat Account "HR Elite Club"



Scan the QR code to follow OKX LinkedIn Company Page

