

THE STATE OF CRYPTO: CORPORATE ADOPTION

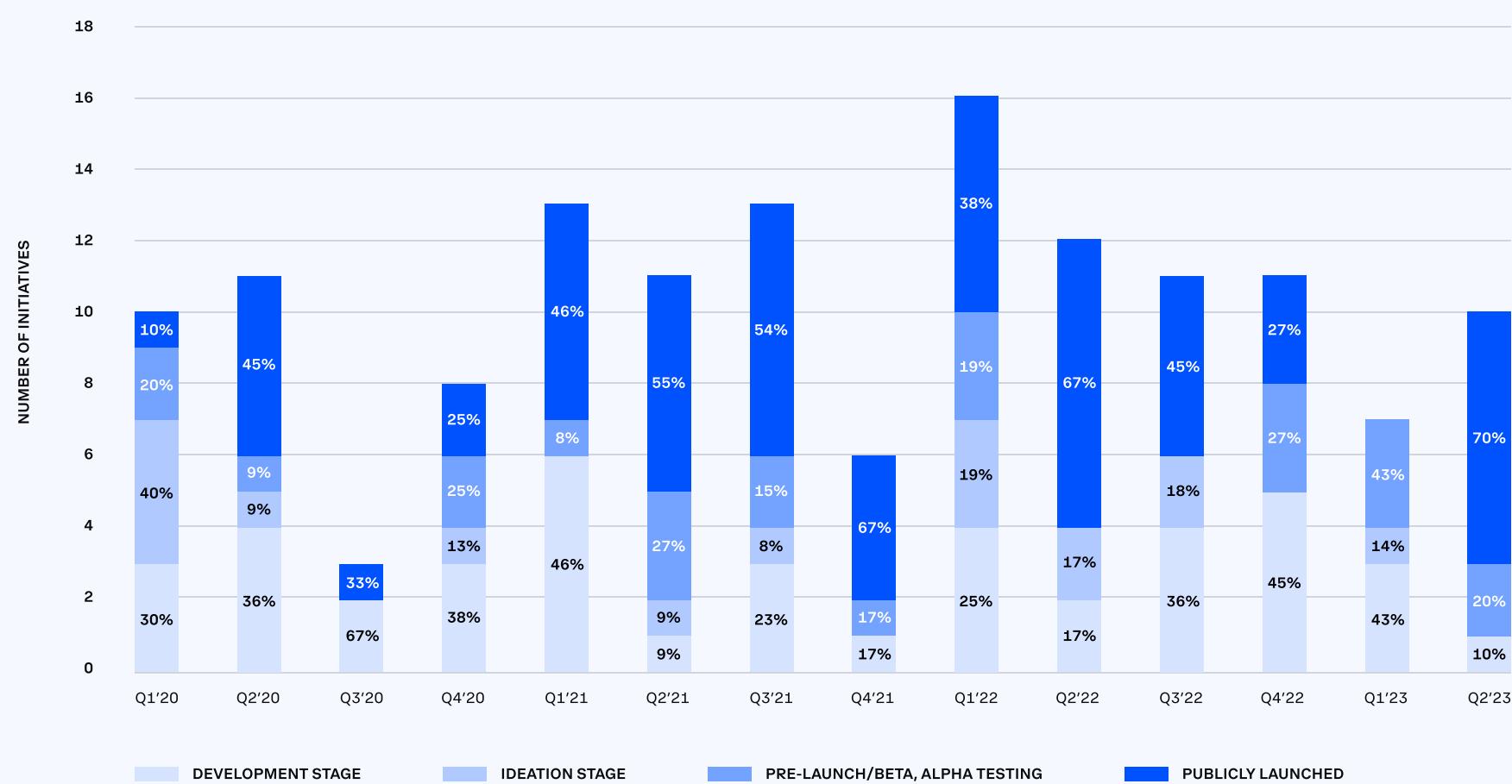
Second Quarter 2023

June 2023

Executive Summary

More than half—52%—of the Fortune 100 have pursued crypto, blockchain or web3 initiatives since the start of 2020, according to the enclosed research conducted in partnership with The Block. About 60% of Fortune 100 initiatives reported since the start of 2022 have been either in the pre-launch stage or already launched. Zooming out, 83% of surveyed Fortune 500 executives who are familiar with cryptocurrency or blockchain say their companies have either current initiatives or are planning them.

Fortune 100 Companies: A Quarterly Breakdown of Initiatives by Stage



Source: The Block Pro Research, 2023

These companies, among the world's largest and best known, are innovating and investing in these technologies because they know that our century-old global financial system needs updating, that blockchain can be a foundational solution, and that not keeping pace will mean losing ground in this global economy to competitors around the world, among other reasons. **About two thirds (64%) of surveyed Fortune 500 executives who are familiar with cryptocurrency or blockchain say that investing in these technologies is important for staying ahead of their competition.**

Key findings

Through research into US Fortune 100 company activity and a survey of crypto/blockchain-aware US Fortune 500 executives, this debut report on web3 adoption explores corporate America's growing embrace of crypto, blockchain and other web3 tech, what's driving it, trends in investment and innovation, and how continued regulatory uncertainty may affect it. Among the report's findings:

- Tech, financial services and retail account for most of the initiatives ($\approx 75\%$) undertaken by Fortune 100 companies since Q1 2020. The 10 companies with the highest number of initiatives consist of four of the largest tech companies, four of the largest banks, a retail giant, and a beverage colossus.
- Fortune 100 companies have made 109 private venture capital investments across 80 crypto blockchain startups since 2017, participating in rounds totaling more than \$8 billion. The average Fortune 500 company initiative or project budget for 2023 is nearly \$5.8 million.
- Among the crypto/blockchain-aware Fortune 500 executives surveyed, similar percentages expect that their competitors will boost investment in the next two years (60%), and that their own company's investment will grow in the next two years (57%).
- Blockchain is the heart of corporate innovation: data collection/management (for both customer and internal data) is a top current use case and also the focus of the most planned initiatives among the Fortune 500, with 77% of the surveyed executives agreeing that blockchain could help make the financial system work better for everyone. Among Fortune 100 tech brands, web3 initiatives have focused mainly on infrastructure, followed by supply chain management and data collection/management.
- A lack of clear rules for crypto, blockchain and web3 tech is not only a top barrier to investment and adoption, but a perceived challenge to US leadership of the global financial system: 87% of the surveyed Fortune 500 executives say clear rules are important to sustain it. Another nine in 10 (92%) agree that policymakers should develop new rules for these new technologies, instead of enforcing older rules developed for older technologies.

Heightened stakes for clear rules

Concerns about both company and US competitiveness raise the stakes for clear rules in the US that support innovation and job creation, and preserve US leadership of the global financial system. The US is at risk of losing out on 1 million web3 developer jobs and 3 million related non-technical jobs to other countries between now and 2030 if it continues on its current path of regulation by enforcement. Its share of global web3 development already has dropped from 40% to 29% in the last six years,¹ forfeiting influence over global financial and data standards to other countries and pushing innovation

¹ [Electric Capital Developer Report](#),
March 2023

and investment overseas—even as 73% of the Fortune 500 executives say that for crypto, blockchain or web3 initiatives, their company would prefer working with a US-based partner.

Two tech revolutions

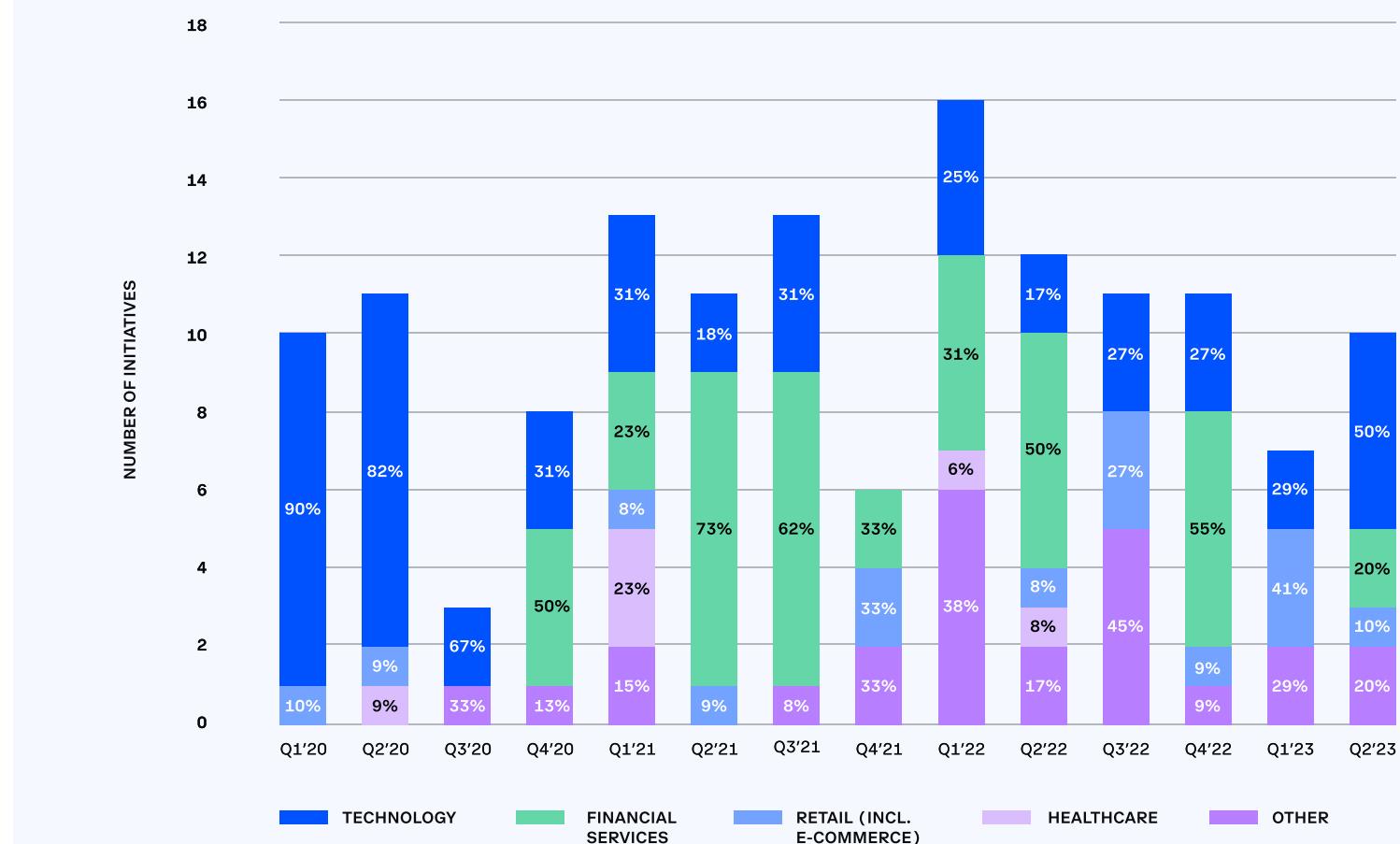
After decades of development, the ChatGPT-fueled rise of AI adds to the importance of this moment in web3 adoption as companies start to weigh the relationship between machine learning and decentralized computing. Within our research into corporate adoption of web3 are hints that AI and web3's paths are likely to intersect—such as IBM's leadership in the volume of web3 initiatives in the context of its plan to replace nearly 8,000 jobs with AI, or Microsoft's high volume given its reported \$13 billion investment in OpenAI.² **Sixty-three percent of surveyed crypto/blockchain-aware Fortune 500 executives say web3 technologies will be pivotal for business, similar to the internet or artificial intelligence.**

² Coinbase recently outlined a range of issues in generative AI that could be addressed through blockchain technology and crypto protocols, from enabling data accessibility, to distinguishing between AI-generated and human-created online media.

This research report is Coinbase's latest release of our integrated campaign to educate the public about the role crypto, along with blockchain and other web3 technologies, can play in updating the global financial system for the benefit of corporations and consumers alike.

Adoption snapshot

Fortune 100 Companies: A Quarterly Breakdown of Initiatives by Industry



Source: The Block Pro Research, 2023

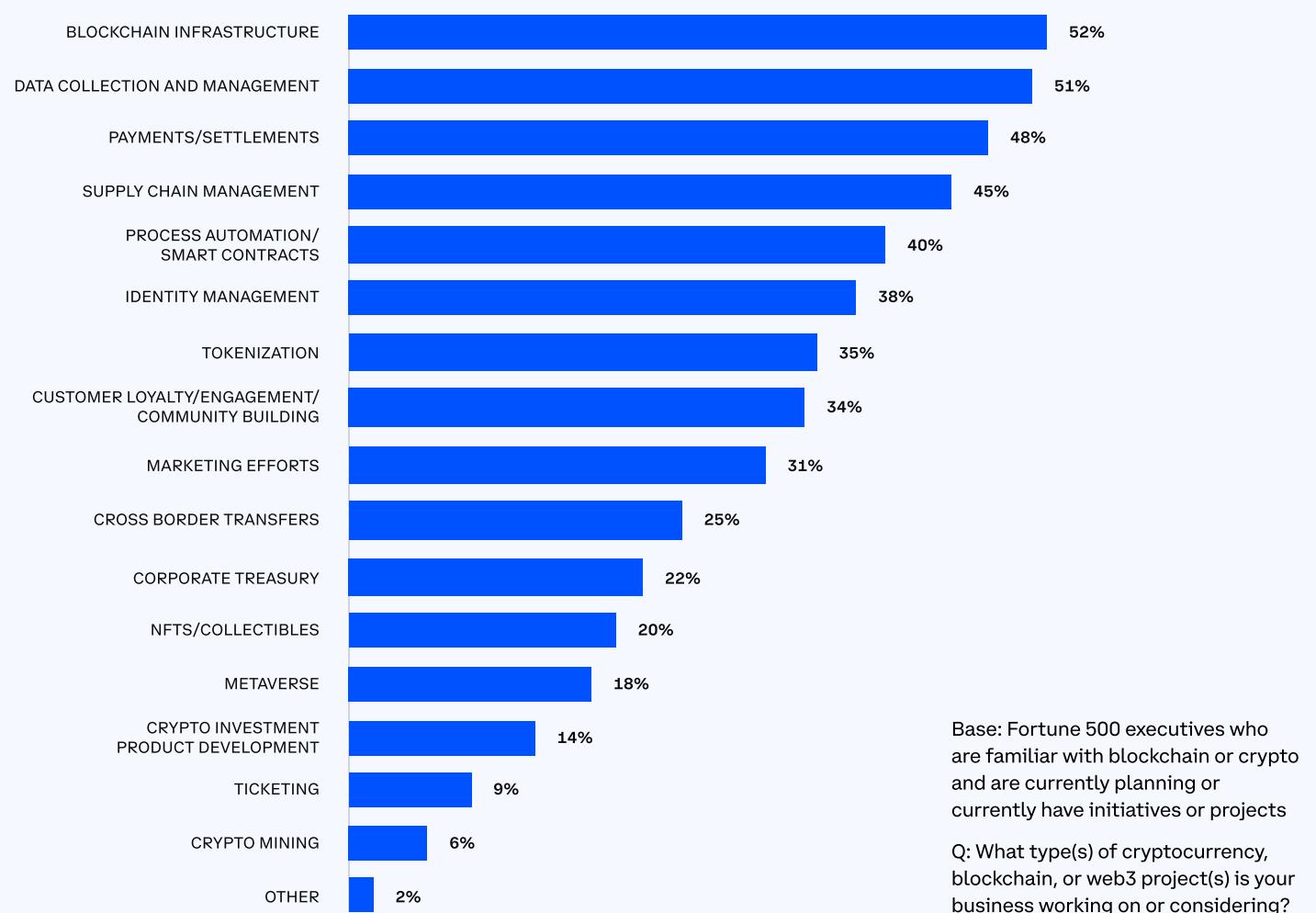
Many of the biggest and most prominent US brands are engaging with web3 technologies to stay competitive and position themselves for the future. Among crypto/blockchain-aware Fortune 500 executives surveyed:

- Concern about staying ahead of the competition is significant motivation (64%); meeting consumers' expectations is a secondary concern (45%).
- 55% say they're working on crypto, blockchain or web3 initiatives because the technology enables efficiencies for their company.
- Their own top sources for learning about these technologies are industry reports (63%) and industry events (62%), followed by news coverage (49%).
- Many Fortune 500 executives note that web3 is critical to their companies' survival and growth, that business is moving in this direction, and they don't want to be left behind. Executives focusing web3 efforts on global supply management and inventory control also note that the world needs to function as a single entity and that web3-based technologies will greatly facilitate.

Among Fortune 100 companies, tech, financial services, and more recently retail have led web3 adoption since the start of the decade:

- The top 10 Fortune 100 brands in volume of web3 initiatives are: 1) IBM (18); 2) Alphabet (11); 3) Microsoft (11); 4) Goldman Sachs (10); 5) JP Morgan Chase (9); 6) Amazon (6); 7) Citigroup (6); 8) Coca Cola (5); 9) Nike (5); and, 10) Bank of America (5).
- In H1 2023 in particular, retail's heightened activity has compensated for a drop-off in activity in financial services.
- Within tech, there are differences between the companies leading in web3 initiatives versus companies leading in web3 patents filed. Fortune 100 tech brands IBM, Alphabet, Microsoft and Amazon rank in the top 10 for active initiatives; IBM, Microsoft, HP, Oracle, Intel, Cisco and Dell are in the top 10 for web3 patents.
- Some quieter sectors have their outliers. For example, the insurance industry counts relatively few web3 initiatives overall, but MassMutual has taken part in seven investment rounds totaling \$1.3 billion, and State Farm ranks fifth among all Fortune 100 companies in web3 patents filed (135).

Use Cases of Current and Planned Crypto, Blockchain, and Web3 Initiatives among Fortune 500 Executives

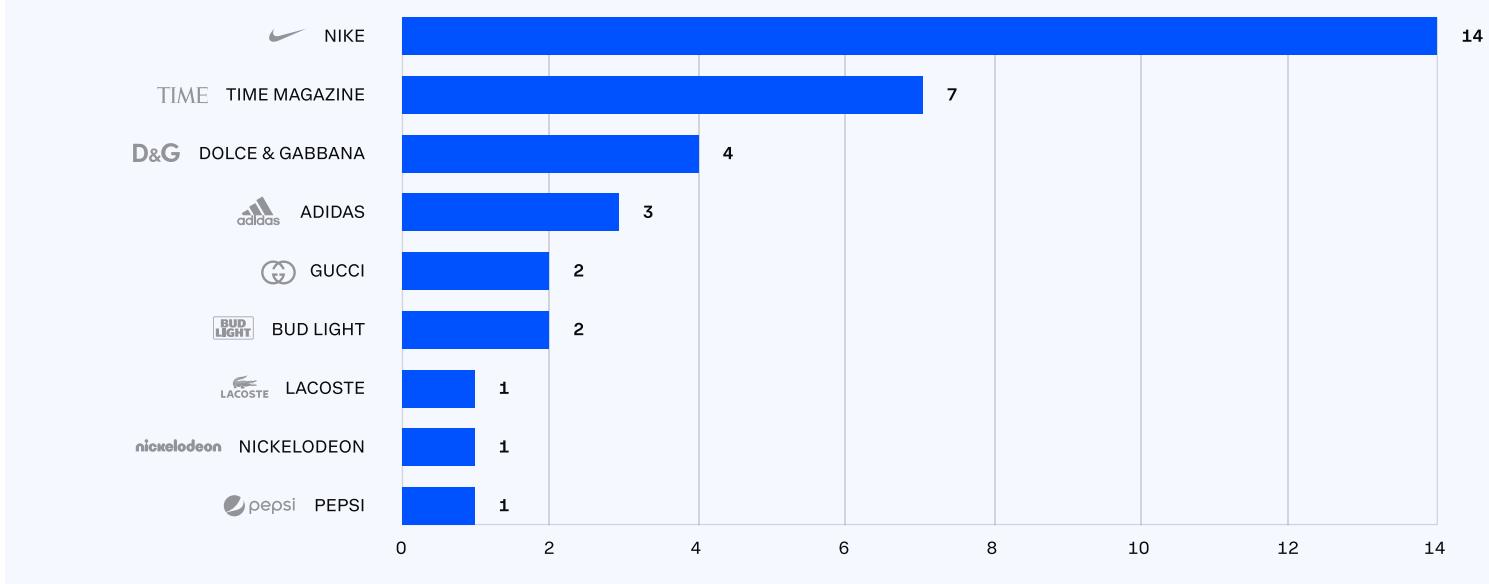


For both Fortune 100 and Fortune 500 companies, blockchain as operational infrastructure is the main driver of innovation and ambitions in web3:

- Blockchain infrastructure that supports a blockchain network³ (52%), data collection and management (for both customer and internal data) (51%), and payments/settlement (48%) are cited as top web3 use cases in the works among Fortune 500 companies with current or planned initiatives—in keeping with how 77% say blockchain could help make the financial system work better for everyone. These top use cases overlap closely with those of the Fortune 100 (blockchain infrastructure, data collection/management, and supply chain management).
- Data collection and management is not only a top current use case among the Fortune 500, but is also the focus of the most planned initiatives.
- And within the financial services sector, initiatives have skewed heavily toward payments, followed by development of crypto trading products (e.g., exchange-traded funds, retail trading products), and tokenization.

³ A company focused on blockchain infrastructure would be developing the underlying technology that supports a blockchain network. This could range from building a new blockchain protocol to improve on existing technology or creating services that make it easier for others to build on or use blockchain technology, such as creating a more user-friendly wallet, a more informative blockchain explorer, providing node/validator hosting services or data indexing and querying services.

Total NFT Collections Released by Major Company

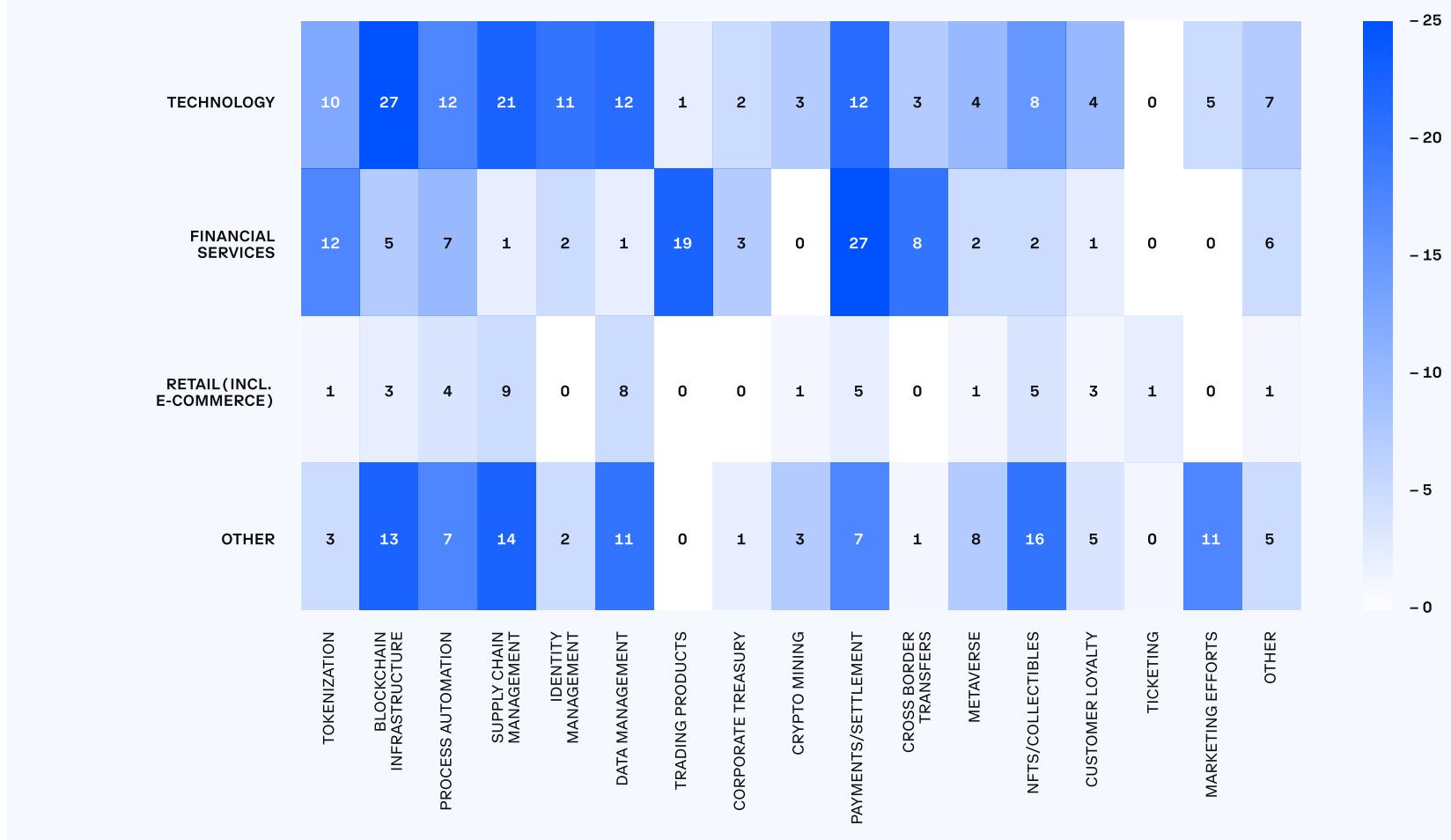


Source: The Block Pro Research, 2023

Historically, the crypto use cases embraced most frequently by Fortune 100 companies have been tokenization, blockchain infrastructure, crypto asset trading products, and payments/settlements, followed by NFTs/collectibles. While NFTs may be less a focus of projects and plans, they're driving retail's recent surge in share of web3 initiatives, which is helping to diversify sector participation beyond tech and financial services, and offers companies a path to return on investment:

- Across 199,347 transactions, Fortune 100 companies together have accumulated royalty revenue of approximately \$101.3 million from 118,354 distinct consumers.
- Collections linked to Fortune 100 companies have generated substantial secondary market volume exceeding \$1.6 billion across all such portfolios.
- Nike leads the Fortune 100 in royalty revenue, distinct purchaser base, and number of unique collections launched.

Heatmap of Total Initiatives by Industry



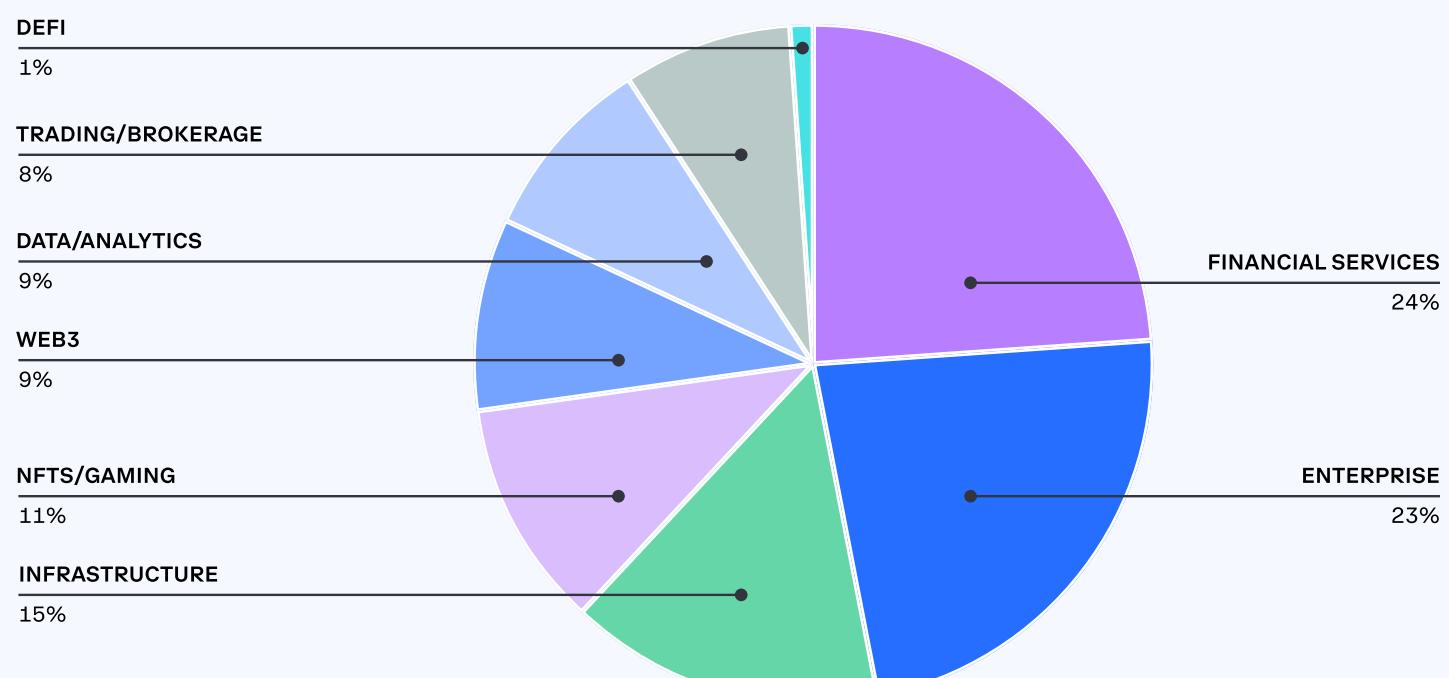
Source: The Block Pro Research, 2023

Among other current examples of top US companies innovating through crypto, blockchain and other web3 tech:

- 1. JPMorgan Chase completes its first-ever DeFi transaction on a public blockchain (tokenization, payments/settlement, process automation/smart contracts):** Working with the Monetary Authority of Singapore (MAS) and other Singapore-based financial institutions, JPMorgan Chase carried out the November 2, 2022 transaction on the Ethereum layer-2 network Polygon, with a modified version of the Aave protocol's smart contract code. The test involved a live cross-currency transaction with tokenized Singaporean dollar and Japanese yen deposits, along with the simulated buying and selling of tokenized government bonds. It marked a significant step in exploration of how traditional financial institutions can use tokenized assets and DeFi protocols for financial transactions.

2. **ExxonMobil pilots the use of excess natural gas energy to mine bitcoin (crypto mining)**: In spring 2022, ExxonMobil announced a pilot project to use excess natural gas from its oil wells in North Dakota to power bitcoin mining operations. The company is working with Crusoe Energy Systems, a pioneer in this field, on an innovative approach to reducing gas flaring, a common oil industry practice by which excess natural gas is burned off due to a lack of means to transport it. ExxonMobil is also exploring ways to provide excess gas to bitcoin miners at other sites around the world.
3. **Lowe's uses blockchain and other technologies to combat organized crime (blockchain infrastructure, NFTs)**: In late 2022, Lowe's launched "Project Unlock," assigning unique NFTs to its power tools to create a secure, public, anonymized record of legitimate purchases of the tools to help customers make sure they're not purchasing stolen goods and, in combination with other anti-theft technologies, to help law enforcement crack down on professional shoplifting rings.
4. **Goldman Sachs, Microsoft, Deloitte and others partner with Digital Asset to launch bespoke blockchain network (tokenization, smart contracts, payments/settlement)**: Designed specifically for financial institutions, the Canton Network aims to balance decentralization and privacy, support interoperability and sync isolated financial markets. The platform uses Digital Asset's smart-contract language, Daml, to synchronize assets, data, and cash. Announced in May 2023, the initiative is meant to overcome challenges to financial institutions' adoption of blockchain, such as the need for privacy, control over data, and scalability, while maintaining compliance with regulatory and legal requirements.
5. **Nike partners with EA Sports to integrate apparel NFTs in video games (NFTs/collectibles, metaverse)**: In June 2023, EA Sports and Nike announced a partnership to integrate virtual assets from .Swoosh, Nike's Web3 marketplace platform, into future EA Sports games. The assets primarily will include virtual footwear and apparel, with more details still to come.

Fortune 100 Companies: Investments by Category



Source: The Block Pro Research, 2023

Web3 venture investment by Fortune 100 companies is down in 2023, in keeping with the broader pullback across all sectors due to the tough macro environment⁴—just as the overall volume of Fortune 100 web3 initiatives is down from an eventful 2022 but building back at a respectable rate in 2023. Top US companies continue to invest in global competitiveness and prepare for the future of the financial system through both owned projects and venture funding:

- Fortune 100 companies have made 109 private venture capital investments across 80 crypto blockchain startups since 2017, participating in rounds totaling more than \$8 billion.
- The most common crypto investment categories are crypto financial services and enterprise solutions such as B2B blockchain-related services, together making up almost 50% of all deals, followed by infrastructure, such as nodes or dev tooling.
- Citi Ventures, Google Ventures, Microsoft Ventures, and Goldman Sachs have made as many crypto private investments as all other Fortune 100 companies combined.
- According to Fortune 500 executives surveyed, the average web3 initiative or project budget for 2023 is nearly \$5.8 million.
- 40% of Fortune 500 executives say their companies have increased investment in these technologies in the past year; 57% expect that their company's investment will increase in the next two years.
- 60% expect that their competitors will increase investment in the next two years.

⁴ "Global VC Funding Falls Dramatically Across All Stages In Rocky Q1, Despite Massive OpenAI and Stripe Deals," April 5, 2023

Fortune 100 Web3 Investors by Number of Deals

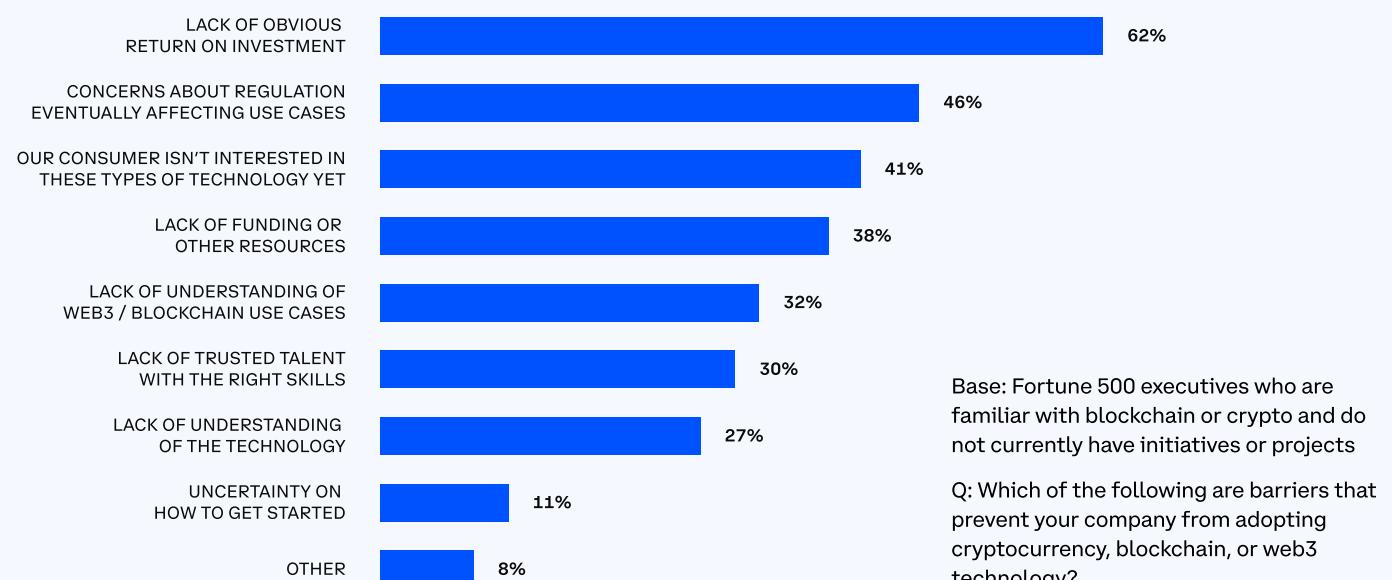


Note: includes deals from Q1'17 to Q2'23

Source: The Block Pro Research, 2023

Opportunities to expand adoption

Barriers to Crypto, Blockchain, or Web3 Adoption among Fortune 500 Executives



How to expand crypto, blockchain and other web3 technology adoption further across the Fortune 100 and Fortune 500? All Fortune 500 executives surveyed for this report are familiar with crypto or blockchain, so identifying what they see as barriers to adoption, combined with learnings and data on Fortune 100 activity, begins to reveal a playbook to unlock further growth. Based on input from the surveyed Fortune 500 executives, we see three key themes to achieving broader corporate adoption:

1. Educating corporations and consumers about the benefits of investment.

- A lack of internal understanding—of web3/blockchain use cases, of the technology itself, and of how to get started on web3 initiatives—amounts to a significant blocker.
- A majority of the executives cite a lack of obvious return on investment as the biggest hurdle, but as this report illustrates, companies are pressing forward to experiment and apply these technologies to unlock new use cases.
- The findings also suggest that consumer interest is a less powerful driver of corporate adoption, secondary to concern about competition: 41% of the executives surveyed say their consumers aren't yet interested in this type of technology, and 45% say investing is important for meeting their consumers' expectations, a strong plurality but well behind the 64% who say investing is important for staying ahead of their competition.
- **NFTs are one example of growth in successful consumer engagement and company ROI. Educating consumers about how other corporate uses of blockchain can help them personally also can build demand. Our hope is that the range of other use cases and accompanying trends and data in this report spread understanding of the potential for corporate web3 initiatives. (After all, among the Fortune 500 executives surveyed, their own top sources for learning about these technologies are industry reports (63%), industry events (62%), and news coverage (49%).)**

2. Partner with developer communities and colleges to educate more skilled talent and keep the innovation on-shore.

- Nearly one third (30%) of the executives cite a lack of trusted talent with the right skills.
- This comes at a time when the US has been losing share among blockchain developers around the world at a rate of 2% per year for the last five years, dropping from 40% to 29%—tied with Europe. Asia's share is 13%.
- **The good news: There is potential for 1 million new blockchain-related open-source developer jobs and 3 million related, non-technical jobs to be created by 2030.⁵**

3. Continue to push for regulatory clarity.

- Internal concern about undertaking web3 initiatives, only to have regulation adversely impact those initiatives, is the second-biggest barrier to adoption (46%).

⁵ Electric Capital Developer Report, March 2023

- Nine in 10 of the executives surveyed (91%) agree that lack of clear regulation on crypto, blockchain or web3 is making this space hard to navigate. The survey also finds that 52% say their company is holding off on major investments in crypto, blockchain or web3 until they feel more confident about what regulations will be established.
- Another nine in 10 (92%) agree that policymakers should develop new rules that are right for these new technologies, instead of enforcing older rules that were developed for older technologies.
- **At Coinbase, we've launched an integrated campaign to educate the public and policymakers about the role crypto, along with blockchain and other web3 technologies, can play in updating the global financial system for the benefit of corporations and consumers alike.**

Despite the ongoing macro market correction, FTX, and regulatory considerations, crypto adoption in the US continues. Regulatory uncertainty remains an ongoing concern for top corporations in terms of their own ability to compete and that of the US in the global financial system and the global economy. However, with consumer markets around the world including the UK, EU, Japan and UAE establishing crypto-forward frameworks, and the likelihood that certainty will arrive in the US (either through the legal process or legislation), the landscape will continue to evolve. The sector has faced significant headwinds of late, yet the current pace of adoption outlined in this report, by leading US companies focused on the medium and long term, speaks to the size of the opportunity.

At Coinbase, we're working hard to help update the financial system by building trusted products that expand the utility and adoption of crypto because we believe crypto and blockchain technology have the ability to increase economic freedom and opportunity around the world. Coinbase chose to become a public company in the US because we believe the US would best be served by embracing this fundamental innovation, but we're also focused on international markets, many of which are moving forward with strategies to become "crypto hubs." We would like to see the US take a similar approach, but a regulation by enforcement approach in the US is instead leading to a disappointing trend for crypto development in the US.

Methodology

Unless otherwise footnoted, data and insights cited in this report are derived from the following sources:

1. An analysis of web3 initiative activity by Fortune 100 companies from Q1 2020 to Q2 (early June) 2023 by The Block Pro Research, the digital assets market research and data division of The Block. "Activity" is defined as publicly available information collected manually from web, social, and crypto aggregators and categorized by stage and crypto use case (e.g., NFT, financial assets, payments, tokenization, marketing/ customer loyalty, etc.).
 - **Initiatives and venture investment:** The Block conducted searches of publicly available information (news, company filings, announcements), using keywords such as "crypto," "blockchain," "NFTs," "metaverse," and "digital assets" across, web, social, and crypto aggregators. Search results were manually filtered for relevance, aggregated, and deduplicated. For each initiative in the resulting database, The Block assessed the stage of the initiative and the crypto domain(s) it pertains to.
 - **NFT on-chain data:** This research involved a three-step process to gather and analyze data related to the integration of non-fungible token (NFT) collections by Fortune 100 companies. The Block cross-referenced Fortune 100 companies with their Ethereum NFT contract addresses to identify NFT collections, and then pulled royalties, trading volumes, and unique buyers analytics from Dune Analytics, a web-based platform enabling querying of public blockchain data.
 - **Patents:** Patent application data was sourced by The Block from Google Patents Public Data, provided by IFI CLAIMS Patent Services, combined with related data in Google Patents Research Data, containing English-language machine translations for all titles and abstracts from Google Translate, similarity vectors, and extracted top terms. The Block then filtered for patents filed by Fortune 100 companies containing specific crypto keywords (and variations) within their top terms. Keywords used include "blockchain," "cryptocurrency," "distributed ledger," "digital assets," and "smart contracts."
2. A survey of >100 Fortune 500 executives at the level of director and higher, who are aware of crypto and blockchain, conducted for Coinbase by a third-party research firm from May 26 to June 1, 2023.