

**Subcommittee on Innovation, Data, & Commerce**  
**Hearing entitled “Building Blockchains: Exploring Web3 And Other Applications For**  
**Distributed Ledger Technologies”**  
**[June 7, 2023]**

**Documents for the record**

At the conclusion of the meeting, the chair asked and was given unanimous consent to include the following documents into the record:

1. A statement for the record from Nova Labs, June 7, 2023, submitted by the Majority.
2. A report from Electric Capital entitled, “U.S. Share of Blockchain Developers is Shrinking,” March 2023, submitted by the Majority.
3. A Wall Street Journal article entitled, “FDA Official Says New Rule Could Boost Blockchain-Based Food Tracking,” February 1, 2022, submitted by the Majority.
4. A statement for the record from the Chamber of Progress, June 7, 2023, submitted by the Majority.

June 7, 2023

The Honorable Gus Bilirakis  
Chairman  
Innovation, Data, and Commerce  
Subcommittee  
U.S. House of Representatives  
2306 Rayburn House Office Building  
Washington, DC 20515

The Honorable Jan Schakowsky  
Ranking Member  
Innovation, Data, and Commerce  
Subcommittee  
U.S. House of Representatives  
2408 Rayburn House Office Building  
Washington, DC 20515

Dear Chairman Bilirakis and Ranking Member Schakowsky:

On behalf of Nova Labs, I would like to submit the following statement for the record and thank you and the members of the Innovation, Data, and Commerce Subcommittee for holding this hearing on *Building Blockchains: Exploring Web3 and Other Applications for Distributed Ledger Technologies*. We are appreciative of and aligned with your objective to ensure America's continued leadership in the blockchain space. We write to voice our support for your mission and your commitment to preserving our nation's innovation in – as you put it – “the next transformational technology.” By sharing what we are building at Nova Labs, our hope is to further inspire your efforts and open the minds of those who are still exploring the possibilities of blockchain and distributed ledger technology.

The team at Nova Labs is fundamentally transforming the way wireless networks function. Our aim is to eliminate fragmentation and reduce costs for everyday American consumers. By way of background, Nova Labs, Inc. (formerly Helium Systems, Inc.) is a Delaware corporation composed of the development team behind the first iteration of the open-source, blockchain-based Helium Network. Today, Nova Labs is a contributor to the decentralized Helium Network and is focused on developing and deploying commercial wireless communications solutions that run on the Helium Network, including the world's first blockchain-based wireless carrier, Helium Mobile.

The Helium Network – known as the People's Network – is a “network of networks,” meaning multiple wireless standards and complementary networks can be built on top of the Helium Network. Currently, the Helium Network includes two wireless networks, each of which is owned and operated by a decentralized community of independent hotspot owners. The first is a Long Range Wide Area Network, or “LoRaWAN.” LoRaWAN networks are known for both their ability to transmit smaller packages of data across geographically longer distances and for their low power usage. The Helium Network is the world's largest LoRaWAN network and is purpose-built for Internet of things (or “IoT”) devices and sensors, enabling a wide range of IoT applications, including environmental monitoring, food preservation, logistics, and geo-location tracking.

The second is a 5G network that runs on community-deployed, 5G-compatible hotspots that pair with 5G antennas. Helium 5G hotspots use Citizens Broadband Radio Service (“CBRS”) radios to provide cellular coverage. CBRS is a newly opened band of 3.5GHz spectrum available in the United States that uses a shared license access model, making it more economical to provide broad coverage. The hotspots for both the LoRaWAN and 5G networks are built with integrated software that allows them to connect to the Helium Network.

The Helium Network is governed by a public, open-source process through which Helium Network community members can propose changes to the architecture and governance of the Helium Network, including functionality and participation incentives. The Helium Network community is open to anyone, and includes software and blockchain engineers, wireless hobbyists and enthusiasts, equipment manufacturers, service providers, and others utilizing and contributing to the strength and growth of the Helium Network.

Our vision for the future of blockchain extends far beyond what we’ve built to date. On May 4, 2023, we unveiled the world’s first blockchain-enabled wireless carrier, Helium Mobile, which will deliver people-powered, 5G-compatible wireless coverage to communities currently underserved by today’s wireless infrastructure. The Helium Mobile decentralized hybrid MVNO model is an embodiment of the ideals that drove the FCC to create the CBRS shared spectrum model in the first place. Historically, mobile network infrastructure deployment (and therefore coverage and service quality) has been 100% in the hands of the centralized network operators. With our CBRS radio deployment model, we are enabling people and communities to directly impact the shape and quality of their network, to provide coverage where they need, without the byzantine and often dead-end paths the centralized operators currently offer their customers to deploy new coverage. By enabling user-friendly CBRS radios to seamlessly establish a secure connection to the Helium Network’s CBRS radio core and almost instantly create new coverage for Helium Mobile subscribers, we enable underserved communities to quickly and affordably build their own coverage. This decentralized technology also enables entrepreneurs to start new enterprises, create jobs, and continue to grow coverage for Helium Mobile. And lastly, because these CBRS deployments, when coupled with blockchain incentive mechanisms built into the Helium Network, can drive more traffic onto the Helium Network, we have the ability to keep offering cheaper and more feature-rich wireless plans to our consumers.

With Helium Mobile we are proud to offer one of the most economically accessible mobile plans in the United States, all while the very consumers who power the network are rewarded for participating in it. Innovation like Helium Mobile – and the accessible, affordable wireless coverage that it offers consumers – would not be possible without blockchain technology.

Numerous wireless carriers are grappling with the formidable task of replacing substantial infrastructure equipment in response to national security concerns. This predicament fosters uncertainty and unreliable coverage, particularly among wireless customers residing in rural areas. In such circumstances, Helium Mobile and the Helium 5G network can make a tangible impact. The Helium 5G network has the potential to expand wireless coverage without incurring the expenses and complexities associated with conventional wireless infrastructure. Through Helium Mobile, deployment and expansion can transpire organically over time by using the Helium Network’s blockchain to map and report areas of low coverage – precisely in locations where demand is most pronounced.

At a high level, Helium Mobile is one of the first “real-life” applications of blockchain technology. This is what a mainstream blockchain use case for the betterment of society looks like. Nearly every smartphone user who has experienced connectivity issues and high costs will be positively impacted by advances in decentralized network technologies and telecommunications.

From enterprise-grade IoT solutions built using blockchain technology to the world’s first people-powered wireless carrier, Nova Labs is spearheading the charge toward a future where wireless connectivity transcends all boundaries. We are breaking down infrastructural barriers, interconnecting communities, and engineering affordable wireless services that are accessible to everyone.

In submitting a statement to this Subcommittee, our objective is to provide a comprehensive understanding of our work and its benefits, offering education and information to help America further develop this foundational technology. While Nova Labs is proud of its own accomplishments to date, we are but one of several U.S.-based companies building on blockchains with the vision to transform an industry, becoming a resounding positive externality and public utility in the process. And we will continue to demonstrate how this technology can advance our prosperity and improve connectivity for all.

We want to reiterate our commitment to being a resource for the Subcommittee and Congress as, together, we navigate the complex landscape of blockchain and distributed ledger technologies. We believe that by understanding what we are creating and how it can benefit us all, we can collectively further the understanding and development of this transformative technology.

Finally, we appreciate the Subcommittee’s consideration of solutions that protect America’s global leadership in blockchain as Congress navigates the legal frameworks for regulating and overseeing this frontier technology. We are excited about the possibilities and, to the extent possible, will contribute to any efforts that pave the way for a future where wireless connectivity knows no boundaries, and where all individuals have access to affordable and reliable services on the internet of our future.

Sincerely,

A handwritten signature in black ink, appearing to be 'AH' with a stylized flourish.

Amir Haleem  
CEO  
Nova Labs, Inc.

ELECTRIC⚡CAPITAL

# U.S. Share of Blockchain Developers is Shrinking

March 2023

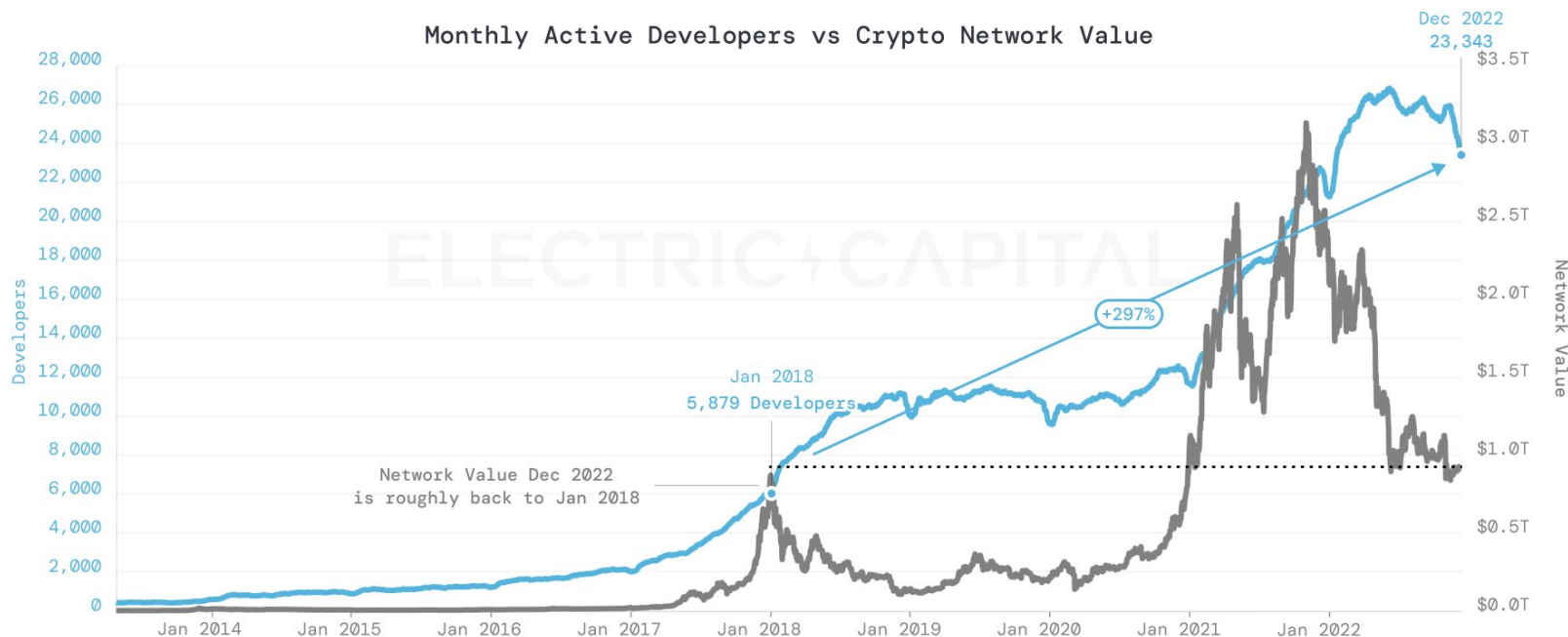


# The U.S. is losing its lead in blockchain developers

- Over 23,343 open source software engineers are responsible for a market worth over \$1 trillion currently.
- The U.S. has lost market share to emerging markets such as India and Ukraine.
- The U.S. is losing 2 percent market share per year for the last five years and is now down to 29% market share from 40% market share. This threatens U.S. preeminence in finance and technology.
- If current growth rates continue, we anticipate 1 million new open source software engineering jobs will be created by 2030. There are likely 3 million new non-technical roles that will also be created by 2030.



# Developers are sticky: network value is roughly back to January 2018 levels, but monthly active developers increased **+297%**

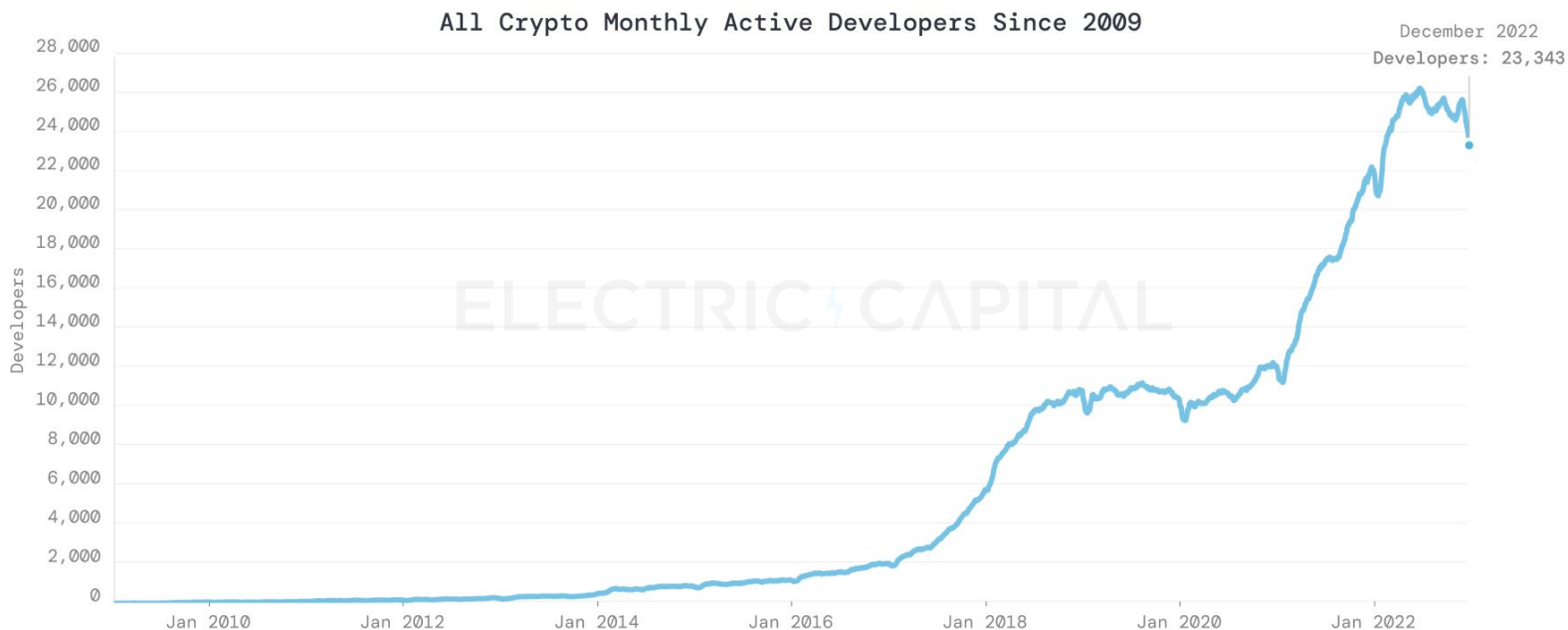


Total Network Value is the value of total crypto market cap from Coingecko.



# Blockchain developer ecosystem keeps growing

23,343 monthly active developers in December 2022

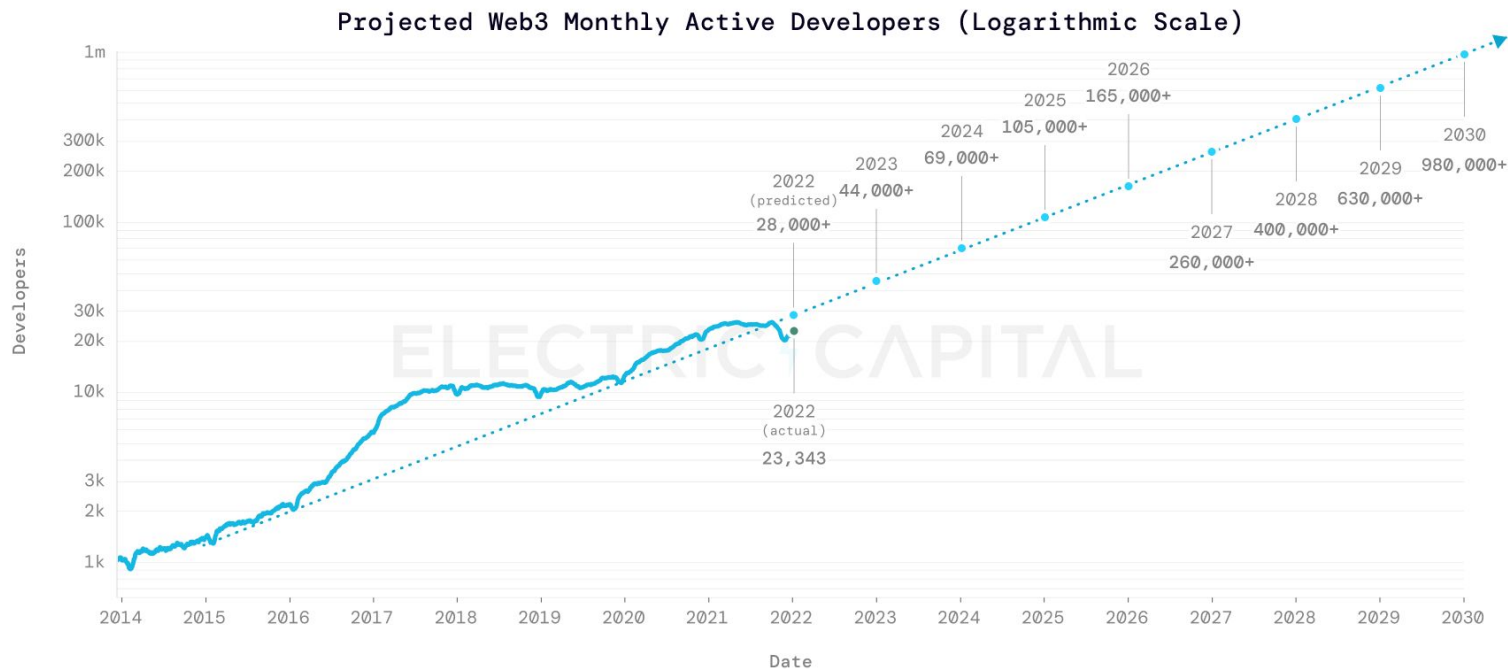






# The U.S. can capture the next 1M blockchain devs

An accumulated growth model from 2017 to 2022 suggests a ~1M developer base by 2030



# Blockchain Developers

## Location

Methodology



# Method #1: Self-Reported Locations

Software developers have accounts with public information such as location or links to their social networks. When available, we extract the country from the location data specified by the software developers in their social network accounts and their code versioning platform accounts.

With this technique we were able to extract the location country from 11,024 developers that contributed to blockchain open-source development up until end of 2022.

## Sources

Twitter, GitHub

## Caveats

1. Users can input free text in the location information. A percentage of values may be false locations or unrelated values.
2. Users who move from one country to another might forget or not want to update their location information.
3. We mapped 193 countries in 33 languages, including flag emojis, 1,008 U.S. locations and the top 30 cities in the world. However, we didn't map cities in certain languages. As a result, countries like China, India, Brazil, or Indonesia may be underrepresented.



# Method #2: Developer Time Zones

To measure blockchain software development activity, we use the time zone of the developers when they submit code to the git open-source database. Our analysis uses over 200 million such instances. The UTC offset when a developer submits code broadly indicates the longitude segments they are located in. We defined 3 broad segments: Americas (between UTC -12 and UTC -3), Europe / Africa (between UTC -2 and UTC +3) and Asia / Oceania (between UTC +4 and UTC +14).

## Source

Publicly accessible source code on GitHub and Bitbucket since 2015. Details are available at <https://github.com/electric-capital/crypto-ecosystems>

## Caveats

1. Time zones are shared by multiple countries and even continents. For example, U.S. time zones are shared with Canada, Central America, and Latin America. Accordingly, we can distinguish between developer activity in the Americas vs. other locations, but not within the Americas. Similarly, time zones overlap between Europe and Africa, and with Asia and Oceania.
2. To evaluate this model's performance, we used Method #1 (Self-Reported Locations) as the ground truth to conclude that Method #2 has an accuracy of 85%. In other words, this time-based model is good at identifying development in the U.S.

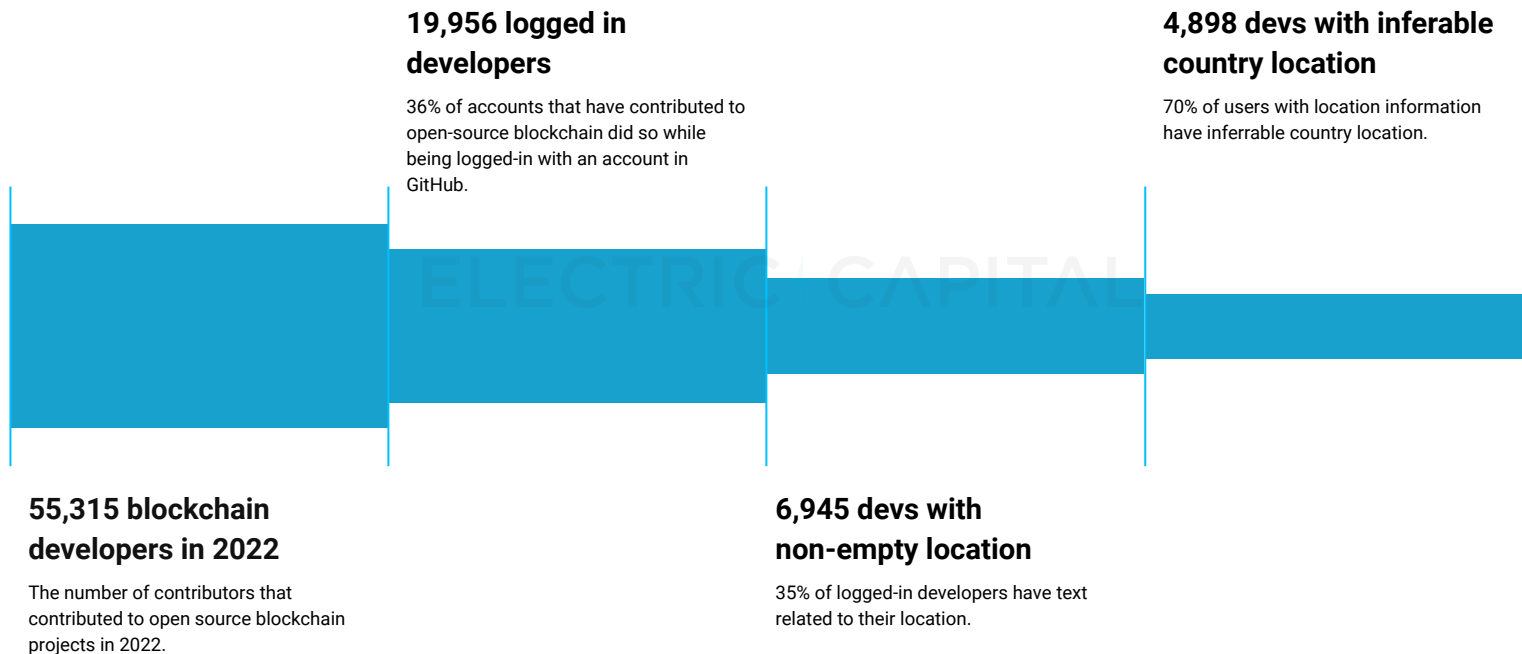
# Method #1

Self-Reported Locations



# Location data is a scarce piece of information from blockchain developers

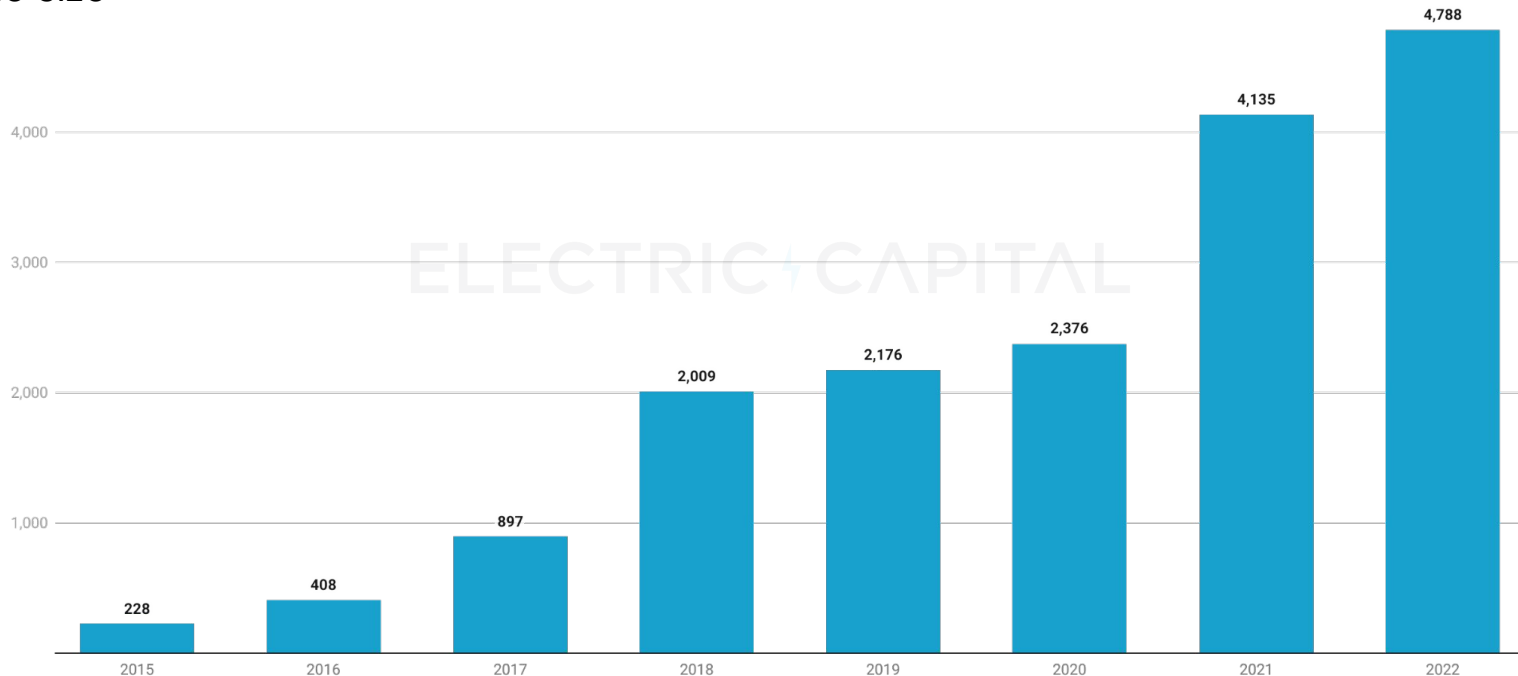
Sample size funnel (2022 only)





# The number of blockchain developers with inferrable country location grows proportionally with the number of active developers

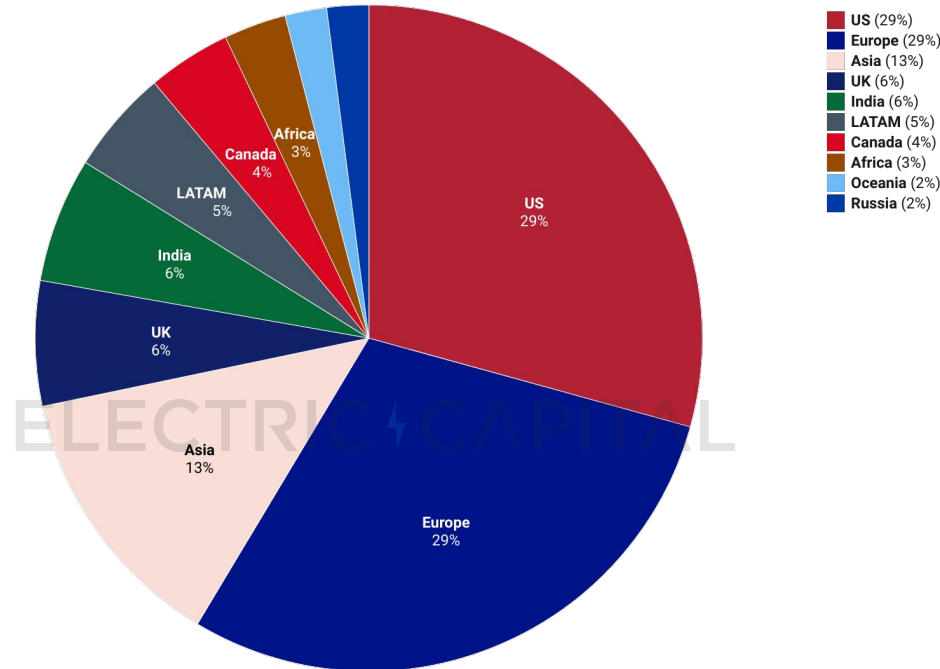
Sample size





# North America and Europe are currently home to 29% of all blockchain developers each

Share of blockchain developers by region in 2022



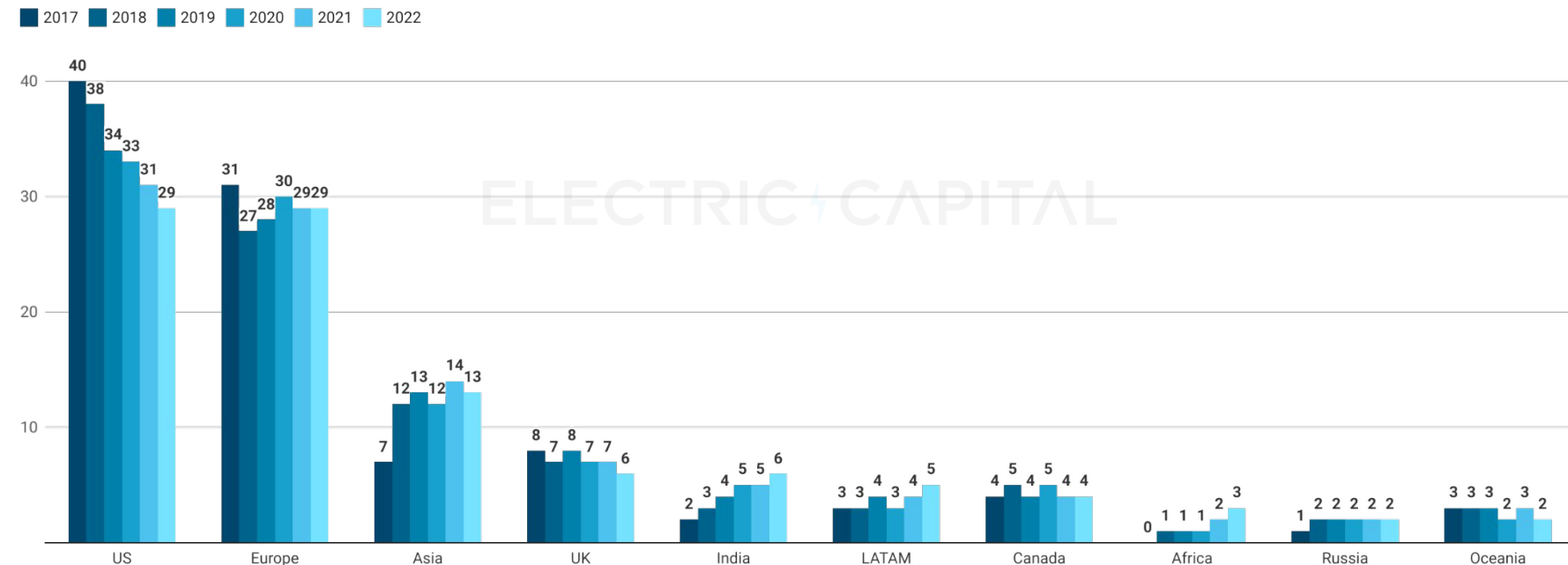
ELECTRIC CAPITAL





# India's blockchain developer share steadily grew from 2% in 2017 to 6% in 2022

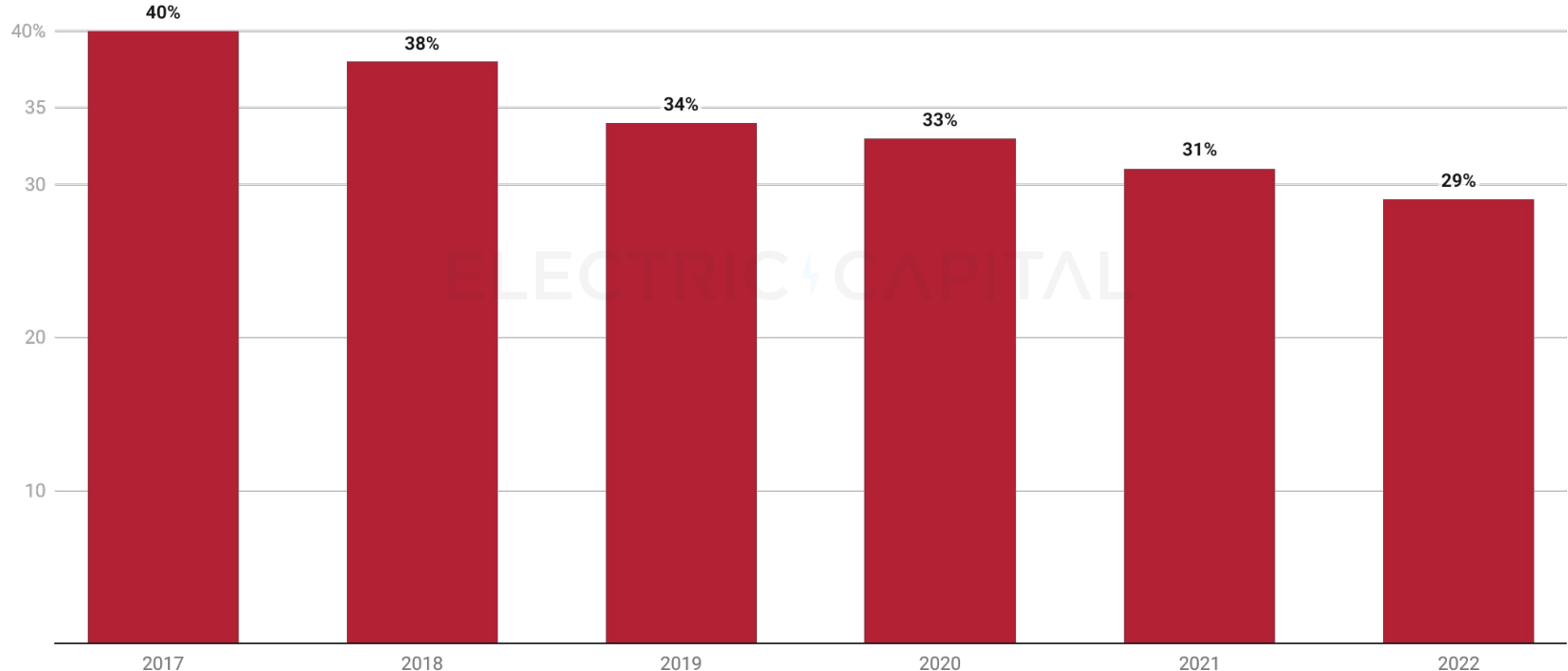
Share of blockchain developers by region over time





# U.S. is losing its lead. Around 2% share is lost every year since 2017

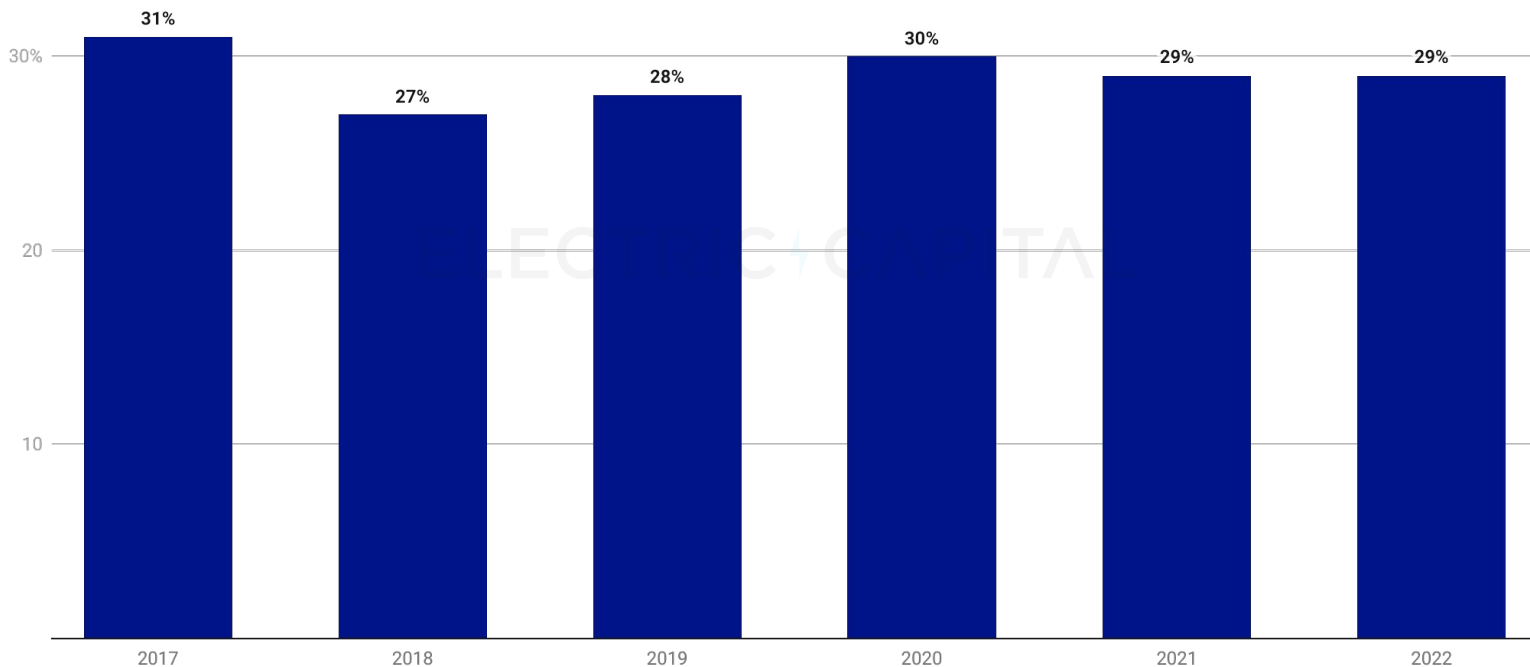
U.S.'s Share of blockchain developers





# Comparatively, Europe (excl. U.K.) has been able to maintain a share of blockchain developers of 29%

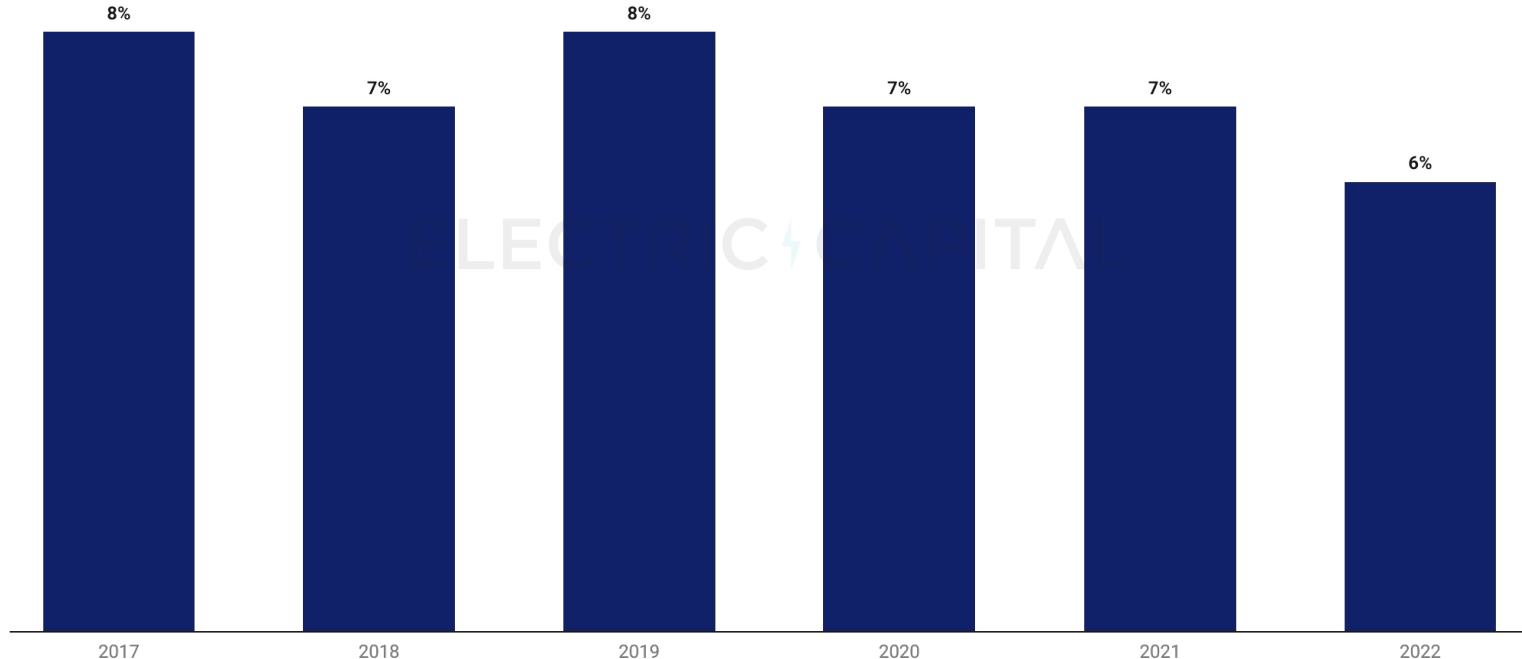
Share of blockchain developers in the E.U.





# 2022 was the first year that the U.K.'s share of blockchain developers went below 7%

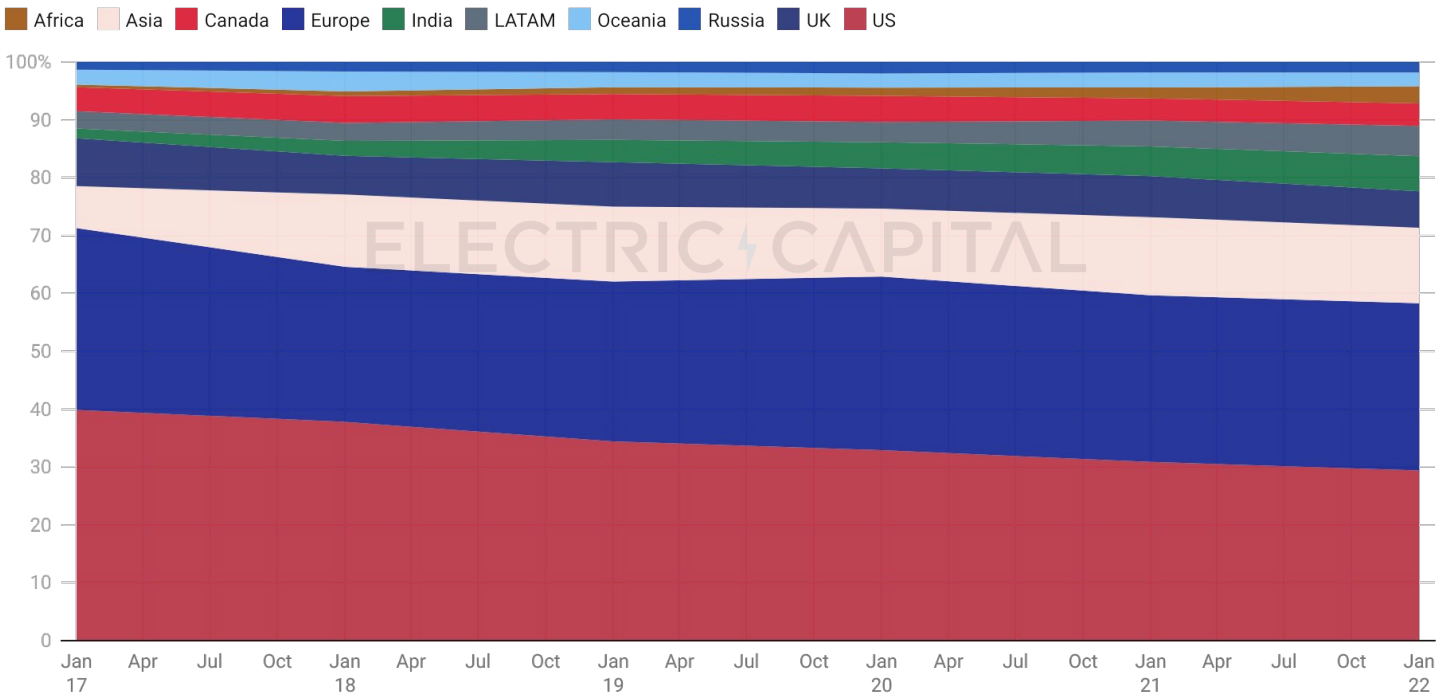
Share of blockchain developers in the U.K.





# India, Africa, and LATAM are capturing blockchain dev share from the U.S.

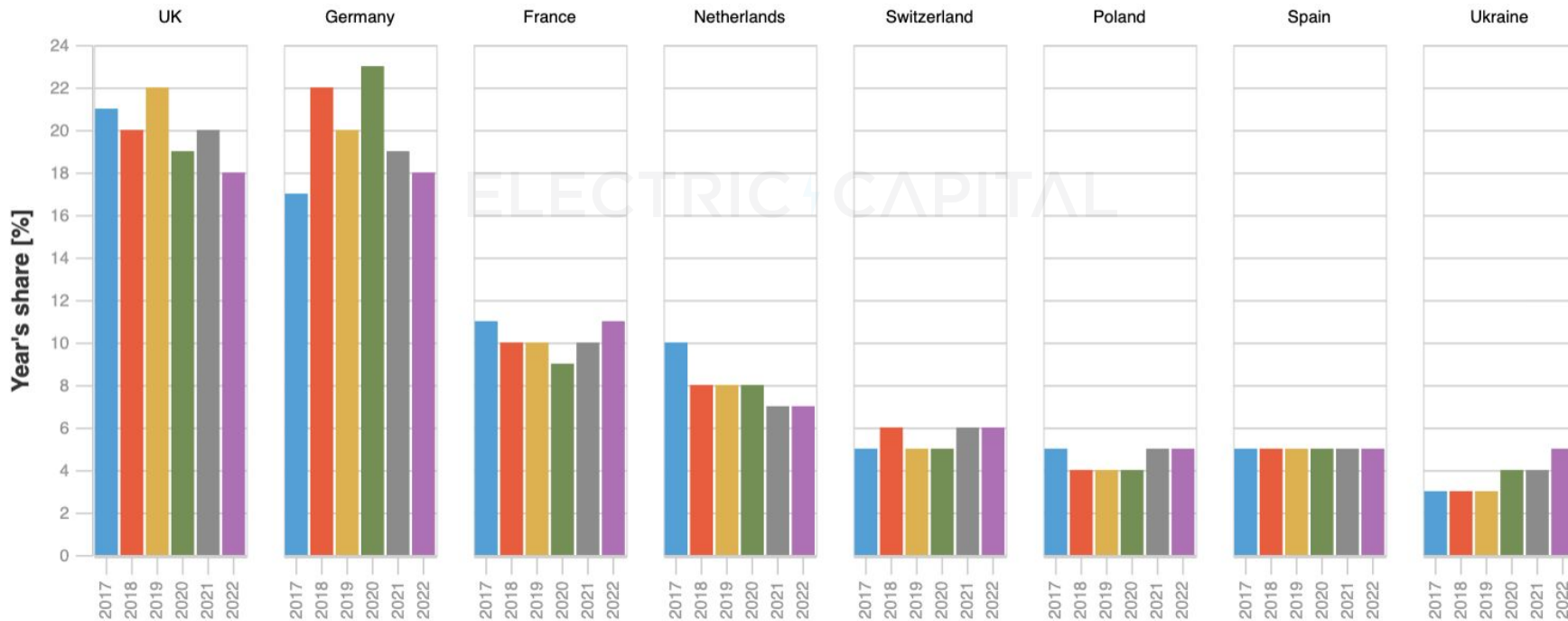
Normalized Share of blockchain developers by region over time





# U.K. and Germany lead devs in Europe, but their share declined slightly; Ukraine's share grew 2% in 3 years

Share of blockchain developers within Europe (4%+ share cut-off)



# Method #2

Developer Time Zones



# An alternative way of measuring location of development work

## Inferring Developer Location through Commit Timestamp Offsets

Our second method for inferring the location of developers analyzes the timestamps of their code commits. We use the offset between the timestamp of a developer's commit and UTC (Coordinated Universal Time) to infer their location.

For example, if a developer commits code to a public repository between UTC -13 and UTC -3, we can infer that they are located somewhere in the Americas.

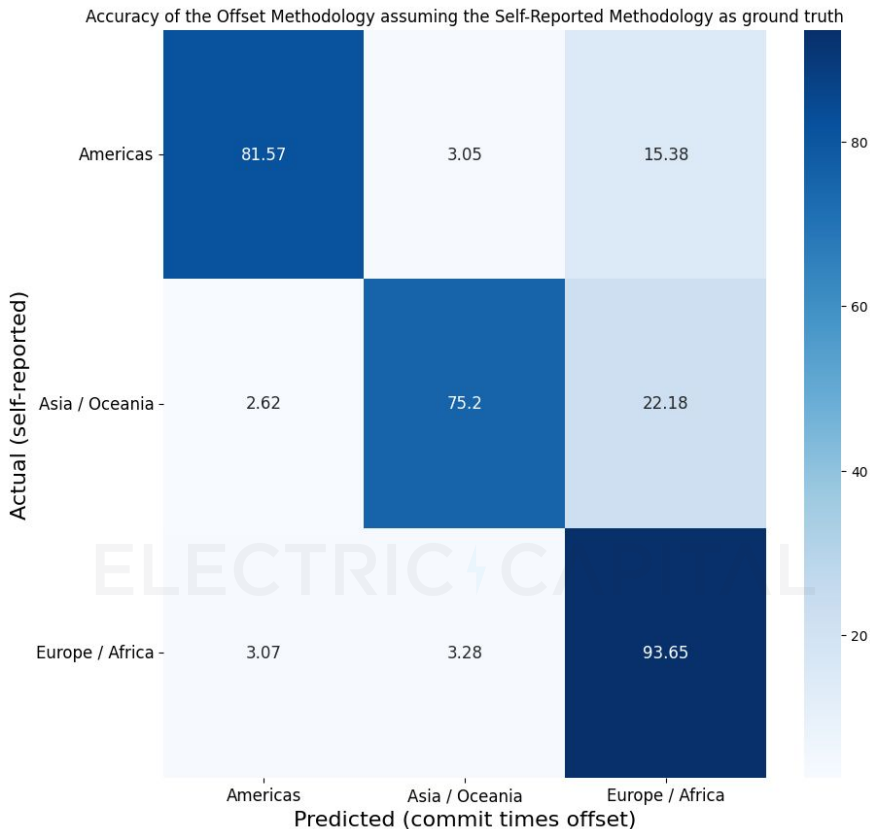
This method can provide a more complete picture of the global distribution of developers, even if they have not provided detailed location information on their social media profiles. Albeit being less precise than Method #1, the volume of data available with Method #2 is orders of magnitude larger than with Method #1.





# Method #2 has an accuracy of 85% if we assume Method #1 as the ground truth

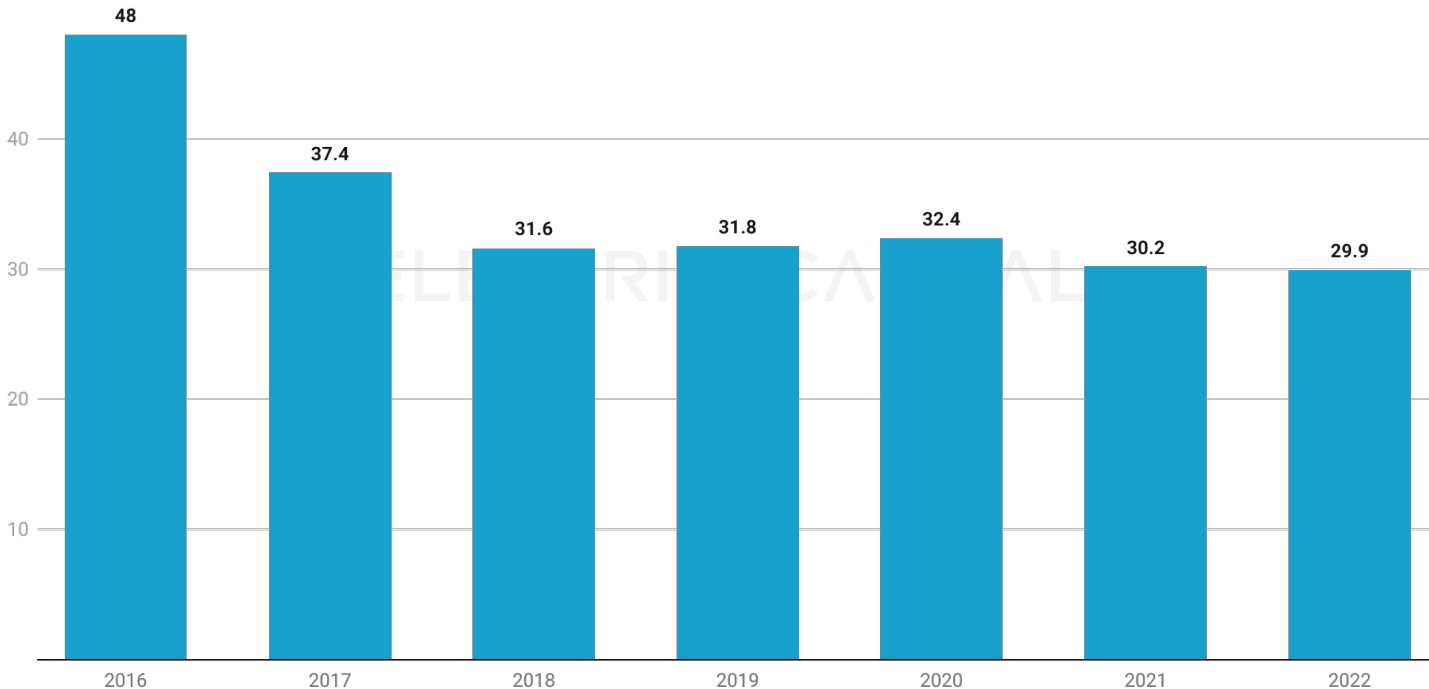
1. We divide the world into 3 wedges with common time zones / longitude ranges: Americas, Europe & Africa and Asia & Oceania
2. We use Method #2 (developer's time zone) to infer the wedge to which developers might belong
3. From Method #1, we map all countries to one of the three wedges
4. For each developer, we compare the inferred wedge using Method #2 with the developer's actual country (from Method #1)
5. We calculate the inference accuracy of Method #2  $\rightarrow$  85%





# Dev share in the Americas is below 30% for the first time, even including LATAM

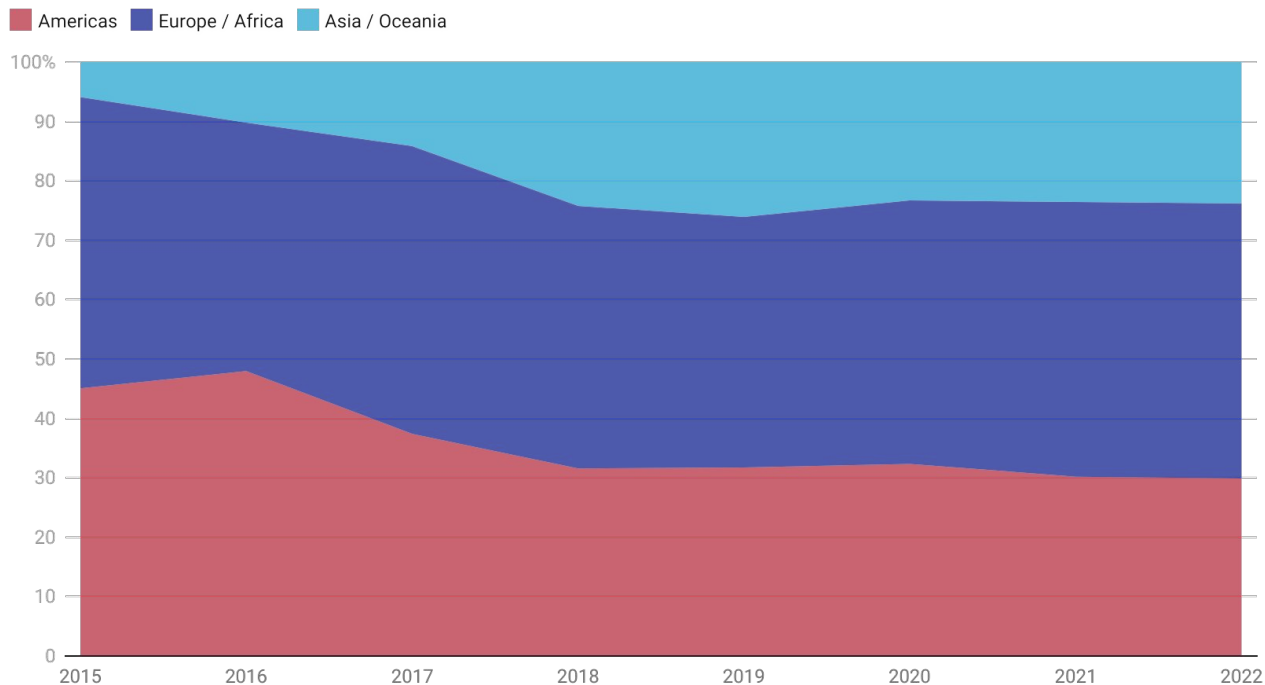
Share of blockchain developers in the Americas time zones





# Countries in the Asia / Oceania regions took 3 years longer to onboard blockchain developers

Share of blockchain developers by time zone wedge



# Appendix

U.S. Specific Thoughts



# Blockchain is the next wave of the Internet

Blockchain and crypto technologies has exploded in popularity as a once-in-a-generation technology platform and economic opportunity. These technologies have the potential to fundamentally change money, the financial system, and the Internet more broadly.

A decentralized Internet ecosystem built on blockchain technologies, where economic value is delivered to the users of the products via tokens, is a monumental shift. What's valuable and celebrated within the industry is also the open-sourced nature of the underlying technology, which enables unparalleled security, access, and transparency.

One of the early and leading indicators of this emerging technology is in software developer engagement – the more activity (“code commits”) in the underlying software, the more vibrant the ecosystem. Due to the open-sourced nature of blockchain technology, it is possible to analyze developer activity by looking at the volume of code commits and derive important trends about the industry.

That the U.S. is increasingly losing market share in blockchain software development mean both that the developer community is getting bigger and more global, but there is **a real risk of losing the U.S.'s leadership position in finance, cryptography, and distributed systems technologies**. This presents a set of real strategic and national security concerns for the United States.



# The U.S. must move quickly to preserve preeminence in financial markets and related technologies

1. **Jobs & Financial Impact:** U.S. preeminence in blockchain software development enables the U.S. to create jobs and fuel financial inclusion, as the broader blockchain ecosystem continues to grow.
2. **Standards Influence:** By designing new protocols, U.S. engineers define the standards for financial systems and data systems. These are the SWIFT and HTTP equivalents of the modern era. Losing market share means that other countries can have larger influence over global financial and data standards.
3. **National Security:** The U.S. must shape development of new technology and financial products to reflect American values and national security objectives.

# FDA Official Says New Rule Could Boost Blockchain-Based Food Tracking

WSJ [wsj.com/articles/fda-official-says-new-rule-could-boost-blockchain-based-food-tracking-11643711402](https://www.wsj.com/articles/fda-official-says-new-rule-could-boost-blockchain-based-food-tracking-11643711402)

February 1, 2022

Feb. 1, 2022 5:30 am ET



Walmart uses Food Trust to track leafy greens and other food categories. Photo: Walmart Inc.

A Food and Drug Administration official said the regulator is writing new rules that could facilitate the adoption of blockchain technology in the food industry.

The rule, which the FDA expects to complete in November, would require the food industry to maintain records associated with critical tracking events on the supply chain for certain products, according to Frank Yiannas, deputy commissioner for food policy and response at the FDA. Those events include growing, receiving, transforming, creating and shipping food products, according to the proposed rule.



Frank Yiannas, FDA deputy commissioner for food policy and response Photo: Gabe Palacio for The Wall Street Journal

The Food Safety Modernization Act Proposed Rule for Food Traceability wouldn't require companies to maintain electronic records, but it's believed many would employ digital systems including blockchain to comply, Mr. Yiannas said. Blockchain is the distributed ledger technology supporting bitcoin and other cryptocurrencies. It also can be used to track and govern transactions.

The concept is sometimes associated with the idea of Web3, which is based on the goal of a more distributed and democratic internet.

Efforts using blockchain for food tracking have been under way at Walmart Inc., Nestlé SA and other food-industry players under a joint effort called Food Trust launched in 2018 using technology from International Business Machines Corp. About 500 organizations are now part of Food Trust, according to IBM.

"I think you're going to see scaling happen at a much higher pace," said Mr. Yiannas, a former vice president of food safety at Walmart who helped lead the Food Trust effort. "The pandemic and the lessons learned and the final proposed food traceability rule are going to be a lot of wind in the sails" for distributed ledger technology, he said.

Food Trust was an early testing ground of that vision, with members seeing in blockchain a way to preserve one consistent history of a food item's path to the aisle of a grocery store.

Blockchain employs a single set of data that's shared among participants without each member needing to keep their own records and then share them, said Kareem Yusuf, general manager of artificial intelligence applications at IBM. That's an advantage, because maintaining multiple versions of a data set can increase the risk of mistakes and disputes, which then need to be resolved, Dr. Yusuf said.



Walmart, which first tested the concept in 2017, started using Food Trust in 2018 to track leafy greens, including romaine lettuce and spinach. It has since added green bell peppers and other categories and expanded the list of suppliers it tracks from 12 to about 100. Walmart declined to share the percentage of food products tracked through blockchain.

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The system poses challenges. Suppliers have multiple ways of submitting data, including uploading spreadsheets and direct connections to supplier IT systems. “We have all kinds of suppliers and they’re at different levels of sophistication of their IT backbone within their own organizations,” said Archana Sristy, senior director of blockchain at Walmart Global Tech.

Based on its experience with Food Trust, Walmart said it’s learning how to simplify onboarding for suppliers, improve data accuracy on the blockchain and make better decisions based on that data.

Walmart said a regulatory push may strengthen the case to scale blockchain-based food tracing.

“It seems obvious that that would be the direction we would go in terms of expanding the scope of the blockchain, but we have to see the final rule before we decide that,” said Tejas Bhatt, Walmart’s senior director of U.S. and global food safety innovation.

Nestlé, an inaugural Food Trust partner, has used the toolset to track 10 food suppliers. The idea is to give customers greater transparency into the food pipeline. Nestlé doesn’t currently track any products through Food Trust, but the company said it’s exploring a pipeline of products to track on Food Trust in 2022 and beyond.

Without an industry-wide push, widespread blockchain adoption will be a challenge, said Benjamin Dubois, sustainability performance acceleration manager at Nestlé.

“We are trying to change and lead the way in that because we see the opportunity and the possibilities, but it has to be across the whole supply chain,” he said, adding that regulation could be the tipping point for Food Trust.

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- [The Corporate Metaverse Was on Life Support. Apple May or May Not Change That.](#) June 6, 2023

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**Write to** Suman Bhattacharyya at [Suman.Bhattacharyya@wsj.com](mailto:Suman.Bhattacharyya@wsj.com)

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Statement for the Record  
House Energy & Commerce  
Innovation, Data, and Commerce Subcommittee Hearing  
“Building Blockchains: Exploring Web3 and Other Applications for  
Distributed Ledger Technologies”  
June 7, 2023

Chair Bilrakis, Ranking Member Schakowsky, and Members of the Subcommittee,

Thank you for the opportunity for Chamber of Progress to provide a written statement for the record for the House Energy & Commerce Subcommittee Hearing entitled, “Building Blockchains: Exploring Web3 and Other Applications for Distributed Ledger Technologies.”

Chamber of Progress is a tech industry coalition promoting technology’s progressive future. Our organization works to ensure that all Americans benefit from technological leaps. Our corporate partners include several leading digital asset companies, but our partner companies don’t have a vote or veto over our positions.

**Blockchain Can Be Used to Develop Smart Cities**

Blockchain technology has driven innovation in many sectors of the American economy in the past decade. From financial services to energy and the environment, companies of all sizes are using blockchain for security, efficiency and transparency. Governments across the United States have taken note of blockchain potentially improving government infrastructure, which can promote the development of smarter, technologically savvy cities.

Here are a few ways that governments have used blockchain technology solutions:

- A. **Land Title Transfers**: The city of Norton, Virginia has leveraged blockchain technology to locate title searches when properties are transferred during real estate sales. Because of this infrastructure, the city and neighboring Wise County, Virginia, has stored over forty years of property history on the blockchain which allows them to obtain records within seconds.<sup>1</sup>
- B. **Credential Verification**: Rhode Island recently piloted a program on the blockchain to issue credentials to Certified Public Accountants. The credentialing process

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<sup>1</sup> <https://cardinalnews.org/2022/03/02/wise-county-gets-on-the-blockchain-with-land-records-project/>

reduced the time to issue a CPA license from weeks to 30 minutes, by establishing an identity blockchain network that digitizes and automates workflows enabling the secure exchange of information among the state agency and citizens.<sup>2</sup>

- C. **Decentralized File Storage:** Filecoin, a decentralized file storage solution, is a blockchain-powered peer-to-peer network that stores files, with built-in economic incentives to ensure files are stored reliably over time. Decentralized file storage provides a marketplace for users and storage providers to store data on other people's servers. This represents an alternative to cloud storage solutions offered by larger companies. Filecoin has many use cases, where they have partnered with hospitals on establishing vital records and other patient information using their decentralized servers.
- D. **Vehicle Titles:** California's Department of Motor Vehicles developed a registry of all titled vehicles in the state on the blockchain.<sup>3</sup> This will allow the state to flag cars that are sold as lemons on the blockchain, which has the potential to protect consumers from making vehicle purchases without knowing the history of the car.
- E. **Mobile Voting:** West Virginia piloted a blockchain-based voting system that allowed military and overseas voters to cast absentee ballots during midterm elections in 2018, with the goal of improving the convenience and security of voting.<sup>4</sup> The City of Denver, Colorado also utilized a blockchain-based voting system during their 2019 Municipal Elections.<sup>5</sup> Although blockchain technology is generally secure, there are increased challenges around securing blockchains containing votes from potential hackers. The United States Postal Service was awarded a patent for a blockchain-based voting system ahead of the 2020 elections, but abandoned their plans for further concept development.<sup>6</sup>

Congress can assist with the development of blockchain technology in cities and states across the country by gathering data on the usage of blockchain by government entities, authorizing funding opportunities specifically for developing blockchain infrastructure, and creating Federal workforce training programs for Americans to learn more about using functions on the blockchain. Together, these concepts can establish "smart cities" from coast to coast, and position the United States as a clear leader in blockchain technology.

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<sup>2</sup><https://www.forbes.com/sites/patrickmoorhead/2022/10/05/rhode-island-wants-to-make-it-easier-to-do-business-using-blockchain-technology/?sh=7f55b5b27a25>

<sup>3</sup><https://fortune.com/crypto/2023/01/27/california-dmv-is-now-on-the-blockchain-why-thats-a-bigger-deal-than-you-think/>

<sup>4</sup><https://sos.wv.gov/FormSearch/Elections/Informational/West-Virginia-Mobile-Voting-White-Paper-NASS-Submission.pdf>

<sup>5</sup>[https://twitter.com/DenverElections/status/1103665752735854594?ref\\_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1103665752735854594%7Ctwgr%5Ea04e8a92fbde56997a359da53ea4ae33b2485078%7Ctwcon%5Es1\\_&ref\\_url=https%3A%2F%2Fqz.com%2Fembed%2Finset%2Fiframe%3Fid%3Dtwitter-1103665752735854594autosize%3D1](https://twitter.com/DenverElections/status/1103665752735854594?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1103665752735854594%7Ctwgr%5Ea04e8a92fbde56997a359da53ea4ae33b2485078%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Fqz.com%2Fembed%2Finset%2Fiframe%3Fid%3Dtwitter-1103665752735854594autosize%3D1)

<sup>6</sup> <https://www.washingtonpost.com/nation/2021/12/13/usps-built-secretly-tested-mobile-voting-system-before-2020/>

## **The Decentralized Web Promotes American Competitiveness**

Web 3.0, or the decentralized web, are blockchain-based software and websites that are operated, owned and updated by communities of users instead of centralized companies. This new web model shifts from the prevalent business models featured in Web 2.0 centered around advertising. With the rise of the decentralized web there is an opportunity to promote more competitive alternatives to existing tech firms.

President Biden's Executive Order on Competitiveness<sup>7</sup> highlighted the "acceleration of corporate consolidation" causing a lack of competition for service and price increases for consumers.

Policymakers and regulators have called for years for more competitive alternatives to Big Tech companies. And consumers have sought out platforms that provide less censorship and more autonomy over their content– when Twitter suspended several journalists from its platform,<sup>8</sup> many users left Twitter for decentralized alternatives like Mastodon<sup>9</sup> and Bluesky.<sup>10</sup> These viral platforms are introducing its users to the benefits of decentralization: full content ownership, community-driven governance and enhanced security. When technology evolves and consumer preferences shift, incumbents are challenged to innovate in response. And Big Tech incumbents have responded– Meta recently announced they were developing a decentralized text-based app called P92.<sup>11</sup>

The competition between Big Tech and decentralized alternatives benefit consumers the most, as they have increased options to choose products and services they prefer. And American companies developing new products and services position the United States as a continued frontrunner in decentralized technological innovation. Although the decentralized web is still in its infancy, its innovative products and services have the potential to compete with Web 2.0 incumbents, ushering in a new era where the blockchain industry and tech can intersect and operate in tandem.

Congress has an important role in ensuring the safety and security of Americans on the decentralized web. Currently, this technology faces structural challenges around accountability for data breaches or involuntary transmission of data. There is no centralized company or user that could be held liable, and could create a problem when decentralized applications are used to mislead consumers or hack into consumer networks. We encourage the development of privacy and security guidelines for decentralized applications and suggest that Congress request information from companies on how they plan to mitigate fraud and illegal activity on their platforms and

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<sup>7</sup><https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/>

<sup>8</sup> <https://www.nytimes.com/2022/12/15/technology/twitter-suspends-journalist-accounts-elon-musk.html>

<sup>9</sup> <https://www.cnn.com/2022/12/20/tech/mastodon-twitter-usage/index.html>

<sup>10</sup> <https://time.com/6274339/jack-dorsey-bluesky-twitter/>

<sup>11</sup> <https://techcrunch.com/2023/03/09/meta-is-working-on-a-decentralized-social-app/>

services. Congress should collaborate with regulators to review current and long term challenges of this technology, and authorize rulemaking to develop a thoughtful regulatory framework that ensures responsible innovation of the decentralized web.

Ultimately, these efforts will usher in a new age of the Internet while preserving the integrity of the technology.

Sincerely,

A handwritten signature in black ink, appearing to be 'JE' or similar initials, written in a cursive style.

Janay Eyo  
Director, Financial Policy  
Chamber of Progress