



VIA ELECTRONIC SUBMISSION

March 3, 2023
White House Office of Science and Technology Policy (OSTP)
1600 Pennsylvania Ave NW
Washington, DC 20500
United States
DARD-FTAC-RFI@nitrd.gov

SUBJECT: OSTP Request for Information RFI - Digital Assets Research and Development [88 FR 5043 / Document Number: 2023-01534]

Dear Sir or Madam,

The Global Digital Asset & Cryptocurrency Association (“GDCA”) welcomes the opportunity to comment on the US Federal Government’s National Digital Assets Research and Development Agenda. We are pleased to see the White House taking note of the transformative power of Distributed Ledger Technologies (DLT) and digital assets, which are revolutionizing the way we interact with each other and with businesses. This recognition demonstrates a forward-thinking approach to the rapidly evolving digital landscape and a commitment to leveraging cutting-edge technologies to drive innovation, promote transparency, enable secure financial inclusive opportunities, and enhance economic growth.

ABOUT GDCA

The Global Digital Asset and Cryptocurrency Association (“GDCA”) is a global, voluntary Self-Regulatory Association for the digital asset and cryptocurrency industry. It was established to guide the evolution of digital assets, cryptocurrencies, and the underlying blockchain technology within a regulatory framework designed to build public trust, foster market integrity and maximize economic opportunity for all participants. In defining the membership base, GDCA has sought to ensure representation from the many actors comprising and adjacent to the digital assets and cryptocurrency ecosystem. Our broad-based membership pulls from all facets of the ecosystem, and includes spot and derivative exchanges, proprietary trading firms, investors, asset managers, brokerage firms, custodians, decentralized technology organizations, banks, legal firms, audit firms, insurance professionals, academics, consultants, and others. GDCA is now made up of approximately 80 entities from around the world, most of which are based in the U.S.

OVERVIEW

By acknowledging the potential of DLT to create decentralized systems that empower users and promote trust, the White House is paving the way for a more equitable and efficient digital economy. Further, these technology applications have the power to not only enable greater digital engagement, but also provide tools that better protect individuals, households and businesses as they interact in a native web-based environment with capabilities that bring transparency, privacy and security in tandem. This includes providing critical banking services to millions of underbanked Americans and reducing costs to the un-/under-banked individuals by up to 80%. This positive step will inspire further dialogue and collaboration between policymakers, industry leaders, and technologists to build a more resilient and inclusive future for all.



Below are responses to the topics addressed in the Request for Information from the Office of Science and Technology Policy. We have limited our responses to topics 1 and 4, so as to provide both sufficient background and reasoning for the ideas presented as well as to remain well within the page limits provided.

GOALS, SECTORS, OR APPLICATIONS THAT COULD BE IMPROVED WITH DIGITAL ASSETS AND RELATED TECHNOLOGIES.

ECONOMIC GROWTH AND JOB CREATION

Digital asset technology presents a tremendous opportunity to enable financial inclusive opportunities that extend the reach of the US dollar and its economy all over the world. The decentralized web has already transformed employment in the US technology sector. As of 2021, there were over 18,000 active decentralized web developers, and the market is [expected to grow by an estimated 43% per year](#)¹ during the next decade. According to LinkedIn, [job postings for positions in Web3 grew 395%](#)² from 2020 to 2021, outpacing the wider tech industry by four times. Although the majority of Web3 jobs are in software and finance, adjacent services like accounting are also experiencing significant demand.

The demand for talent spreads across company size coming from both the largest US companies in technology and finance, as well as nascent startups. Crunchbase, the leading aggregator of early stage company investments, estimates that since the second quarter of 2021, venture capital and private equity funds have [invested \\$40 billion into emerging Web3 companies](#)³, and with the maturity and greater adoption of Web3 applications, the nascent industry could grow to account for 1 million jobs by the end of the decade.

The US is also home to the lion's share of financial technology and alternative financial services companies in the world. Here are a few statistics to consider from research conducted by Circle, Uniswap, TRM Labs, the World Bank and others:

- Decentralized finance payment rails utilizing stablecoins could reduce costs to the un-/under-banked individuals by up to 80%. The US could enable more underserved populations in remittance corridors (which accounts to roughly 3 times foreign aid/official development assistance) with a radically reduced cost for services and helping to achieve a marquee sustainable development goal.
- According to TRM Labs, [approximately 99% of fiat backed stablecoin value is associated with the US dollar](#)⁴. One of the most stable, liquid and transacted USD backed stablecoin is USD Coin or USDC which has grown in circulation by 860% since 2018.
- As global transaction volumes grow—including corporate payments, trade finance, etc.—the ability to transact in near real time with a USD-backed asset, in a programmable way, we can extend US financial and banking power globally even when traditional banking is 'off-hours'. GDCA members like [GoQuant](#) have partnered with industry leaders to provide low-latency digital asset market data 24 hours a day, allowing for significant increases to potential industry profits and positively contributing to America's economic outlook.
- With over \$45B of USDC in circulation backed 80% in short dated (3-month) Treasuries and the balance in USD cash across eight US-banking partners and in segregated accounts, users are easily able to redeem USDC and use it as interoperable as cash for day to day transactions where

¹ Financialnewsmedia.com, "Global Web 3.0 Market Size Expected to Reach \$81 Billion by 2030 as Branding & Marketing Needs Increase."

² LinkedIn News on "Work Shift Labor Market Activity."

³ Metinko and Metinko, "Web3 Funding Sees Huge Drop As Big Rounds Dip."

⁴ "TRM's Ari Redbord Testifies before the U.S. House Committee on Financial Services | TRM Insights."

the ‘holding’ of value and associated liquidity and market volatility risks remain low. Users of USDC are operating in an extended US dollar domain, but unlike use of cash transactions, USDC transactions can be driven 24/7 by users anywhere in the world, and whose tie back to reserves in USD cash and Treasuries reinforces the backing by the US.

- According to [McKinsey](#)⁵, the decline in the use of hard cash continues and was expedited during the pandemic, with Circle estimating that \$30B of economic activity was facilitated with approximately [“15% being wallet-to-wallet transactions \(compared to 2% for non-financialized transfers in traditional payments\)”](#)⁶. As [global remittances continue to grow—and at double digit rates in many countries](#)⁷—the ‘income economy’ that enables cross-border flows in near real time and cheaply continues to be a major concern. Increasingly, every day transactions are happening digitally – more so with tokenized value – which means the extension and reach of tokenized value will increasingly become more mainstream and allow direct facilitation (aid, government stimulus, balance of payments, etc.) of transactions including by and between government entities and private sector businesses and individuals.

SUSTAINABLE CLIMATE INVESTING

The use of digital assets along with the transparency of DLT can significantly improve the landscape for sustainable investing, increasing the flow of investment to sustainable projects, enabling the tracking of their impact and creating liquidity for new impact-linked securities. Despite the growth of sustainable investing over the past decade, the industry is now facing challenges due to its lack of transparency and a distrust by investors skeptical of “greenwashing”, meaning investment products that are labeled as sustainable but do not offer the impact they have promised. Meaningful, sustainable investments into projects that fight climate change and reduce greenhouse gas emissions are critical to our nation’s security and prosperity.

Specifically, the [United Nations Framework Convention on Climate Change](#)⁸ has identified the following ways in which DLT and digital assets can accelerate the efforts to combat climate change. They include:

- Improved carbon emissions trading where carbon assets are recorded on a public ledger to ensure transparency.
- Peer-to-peer trading platforms for trading of renewable energy. The platforms would allow the purchase or sale of renewable energy using tradable digital assets representing a certain quantity of energy production.
- Enhanced climate finance flows including DLT-supported investment frameworks that ensure financing is allocated to climate projects in a transparent way with their impact monitored, tracked and recorded.
- Better tracking and reporting of greenhouse gas emissions reduction to avoid double counting.

New tokenization frameworks have made it easier to successfully invest in and track sustainable projects. For example, the Guardian framework, offered by Hedera Hashgraph, is an open source policy workflow engine that tokenizes climate assets, such as offsets and emissions. The framework provides auditable, traceable, reproducible records that document the emissions process and the lifecycle of carbon. More recent work into Automated Regression Market Makers (ARMMs) also allows for price discovery of semi-fungible digital assets such as carbon tokens, allowing market makers to provide liquidity and incentivizing greater investment into such projects.

⁵ “Accelerating Winds of Change in Global Payments,”

⁶ “Circle Releases First Annual ‘State of the USDC Economy’ Report.”

⁷ “Remittances to Reach \$630 Billion in 2022 with Record Flows into Ukraine.”

⁸ Ultimate Nations Climate Change, “How Blockchain Technology Could Boost Climate Action.”

LOGISTICS

The global supply chain is paramount in today's interconnected and interdependent economy, however, several challenges impact the efficiency and effectiveness of today's supply chains which could be solved through the use of DLT. Participation of multiple states and countries makes it difficult to manage and coordinate all parties involved and the lack of visibility into the supply chain can make it difficult to track progress and identify bottlenecks.

Below are example of how DLT can improve global supply chain processes:

- Automate recordings of delivery times and receipt of goods into inventory
- Automate payments for inventory received and enable 'programmability' as inventory/goods are delivered to which payments would immediately be processed and settled into vendor accounts/wallets
- Automate recording of commodity transfers between supply chain members from the factory to the consumer.
- Alert relevant parties if the commodity held in inventory will expire or if the price of the commodity has met a strike price.
- Execution trade deals automatically by connecting importers, exporters, and their respective banks to the DLT to reduce duplicative paper and redundant quality assurance processes through the programmability of smart contracts.

DLT can provide increased traceability of commodities, improve transparency across the supply chain, and enable the automation of payments—businesses can track the movement of commodities in real-time and when paired with smart contracts (self-executing agreements that automatically enforce the contract terms when conditions are satisfied) can increase efficiency, reduce the risk of error and provide valuable insights to make data-driven decisions. [TruckCoinSwap](#), an innovative fintech transportation company and GDCA Member Firm, have introduced an original use for digital asset technologies in the logistics sector by purchasing invoices directly from transportation workers and companies, providing immediate liquidity via tokens, and settling the outstanding invoices directly with the shipper. TruckCoinSwap places the expected industry savings due to the reduction in intermediary and transaction costs at \$3 billion. By improving the profitability of our transportation industries, we can expect greater consistency in the results that the industry provides - food on our nation's kitchen tables, stocked medicine shelves, and fuel to power our cars, homes, hospitals and schools.

ACCESS TO FINANCE (FOR BUSINESSES AND INDIVIDUALS)

Over the past decade, innovation in securities regulation, such as the Regulation A crowdfunding registration exemption for small and medium sized companies (SMEs) to sell their securities to the public, has made it cheaper and less burdensome for these companies to raise capital. The benefit of the Regulation A crowdfunding framework is two-fold: 1) it allows SMEs to raise capital on similar terms to the public markets and scale more efficiently, and 2) it gives the public access to high yield investment opportunities previously accessible only to institutional and accredited investors. For example, Regulation A has made it possible for retail investors to access competitive risk-adjusted returns from financial products such as real estate and private equity, which were previously only available to institutional and accredited investors.

Despite the positive impact of crowdfunding vehicles for both SMEs and retail investors, their lack of liquidity and transparency have hindered adoption on a larger scale. At present, investors can redeem their shares on specific dates only and the vehicles lack transparency into their holdings and prior transactions. Tokenizing shares of the investment vehicles would allow those shares to be traded on a decentralized exchange, making the sale and purchase of shares easier, and would allow for a corresponding audit trail of those transactions stored on a decentralized ledger. Further embedding AML/KYC controls through the application of digitally verifiable credentials, would also automate the client and counterparty verification

process as tokenized shares and corresponding value was sent and received. Such a process builds trust and transparency into the holders and holdings of an investment vehicle, improves the process of raising capital for SMEs and facilitates the adoption of new crowdfunded investment opportunities for the public.

FINANCIAL INCLUSION

(FOR INDIVIDUALS AND ENTITIES/BUSINESSES - UNBANKED / UNDERBANKED)

According to a 2019 report by the Federal Reserve⁹, 22% of American adults (63 million) are either unbanked or underbanked. In this vein, Decentralized Finance (DeFi) and digital assets have the potential to help the unbanked and underbanked meet their financial services needs without using alternative financial services products that can be both costly and predatory. Unbanked adults do not have a checking, savings or money market account and 40% use some form of alternative financial services – such as money order, pawn shop loan, auto title loan or payday loan. The underbanked include those who may have a bank account but also (primarily) use an alternative financial service product.

According to the 2021 FDIC Survey of Unbanked and Underbanked Households,¹⁰ the main reasons people are underbanked are because they can't meet minimum balance requirements, the lack of trust in banks, privacy concerns and high banking fees.

Financial services that can be facilitated by decentralized finance include the ability to make payments, store and transfer funds, and borrow and invest through peer-to-peer and community lending—all at low to no cost and with minimal friction of engagement with and through traditional bank and nonbank financial institutions. These services can be accessed through a mobile phone, with fast transfer times and often at a fraction of the cost of traditional banks.

Part of this effort should include a recognition of the attributes of DLT that provide new mechanisms in banking and payment processing that can support marginalized populations in furtherance of US national and international economic security interests. Disparaged communities, including those in areas of conflict or humanitarian disarray, can be enabled with funding through digital wallets equipped with virtual assets including USD-backed stablecoins with connectivity to US based bank accounts. These assets ensure access to vital economic resources, as well as the ability to engage in peer-to-peer (P2P) transactions between individuals and merchants providing essential services. Blockchain technology is a powerful tool for nonprofit, non-governmental, and intergovernmental organizations working to deliver aid, and especially so for the recipients in their time of need.

Often, anti-money laundering/financial crimes compliance (AML/FCC) is cited as a cost and efficiency barrier to driving inclusion efforts given the risks of engaging potentially malign or illicit actors. Alternative, decentralized, web-native financial services applications and cryptographically tokenized value systems built on distributed ledger technology carry essential attributes to enhance the core elements of financial system integrity, and therefore help modernize essential AML and consumer protections that are required to enable equitable and secure access. Many in the digital asset industry such as GDCA Member Firm Finclusive, have been working proactively to develop and implement comprehensive frameworks for AML/FCC—such as the industry led Rulebook¹¹—that better align with the technological and operational

⁹“Banking and Credit,”

¹⁰ “2021 FDIC National Survey of Unbanked and Underbanked Households.”

¹¹ Driven by the industry and informed by global regulators and policy makers, the “Rulebook” is a dynamic framework that reflects the operational realities of P2P/Defi/web3 and blockchain-enabled payment and exchange networks and builds upon existing governance and data privacy rules from the following organizations:

- Financial Action Task Force (FATF)
- Society for Worldwide Interbank Financial Telecommunication (SWIFT)
- National Automated Clearing House Association (NACHA)
- National Institute of Standards and Technology (NIST)
- European Union’s General Data Protection Regulation (GDPR)
- Bank for International Settlements’ (BIS) Committee on Payments and Market Infrastructures (CPMI)

realities of web-based/blockchain-enabled financial activities, and in keeping with the international standards for AML/FCC.

Further, they provide the appropriate tools for law enforcement and regulators to proactively combat—and interdict—financial crimes and illicit/malign actors who perpetrate them, which is essential in driving confidence in the security of financial transactions, and the appropriate consumer protections inherent in driving trust in financial services. DLT’s underlying attributes reaffirm these core principles including their being permissioned, distributed, privacy enhancing and immutable – enabling essential controls, transparency and auditability in both the proactive enablement of system integrity and in the advancement of law enforcement and financial regulatory enforcement essential to manage AML/CFT objectives in tandem.

HOUSING EQUALITY

[According to the Federal Reserve](#)¹², the largest source of wealth for the average American is their home and while many Americans today struggle to access the housing market, digital asset technology has presented new and unique ways to reverse this course. For Americans in the bottom 50% percentile, their home accounts for over 60% of their total wealth. In addition to being a primary source of wealth, higher homeownership rates have been shown to reduce crime, improve school performance and build resilient communities. Unfortunately, the US faces a large disparity in homeownership rates. **[According to the US Treasury](#)**¹³, as of the second quarter of 2022, the homeownership rate for white households was 75% compared to 45% for Black households and 48% for Hispanic households. Saving for a down payment is the single biggest barrier to homeownership with over two-thirds of respondents from the **[Urban Institute’s Policy Center](#)**¹⁴ study citing it as their biggest obstacle.

Digital asset technology such as blockchains have also produced unique opportunities to access homeownership. GDCA member **[Safe Rate](#)** is a mortgage marketplace platform built on blockchain which offers a flexible mortgage product that provides homeowners with automatic payment reductions in difficult times. By leveraging blockchain technology, Safe Rate is helping drive sustainable homeownership in the US which in turn supports a more stable economy.

Decentralized finance has the opportunity to increase the number of homeowners by helping prospective homebuyers save for a down payment more quickly and efficiently. Prospective homebuyers can directly invest into low-risk, fixed income assets such as US Treasuries and mortgage-backed securities that offer significantly higher yield than traditional savings accounts to more quickly save for a down payment.

Payments are tracked and audited on a distributed ledger, offering greater transparency than what is provided by banks and other savings products today, and decentralized exchanges allow for the sale and purchase of shares providing price discovery and liquidity. Additionally, a decentralized approach to fixed income investing allows younger homebuyers who have more recently accumulated their wealth in digital assets, to access lower risk, fixed income assets in the decentralized ecosystem to responsibly save for a down payment.

R&D THAT SHOULD BE PRIORITIZED FOR DIGITAL ASSETS

Given the large amount of private sector investment into decentralized technology, we encourage government research efforts to focus on use cases where there are inefficiencies in how consumers engage with both the government and the private sector, and create sandboxes to pilot new decentralized solutions that improve the lives of consumers. Below are use cases we have prioritized where the government can proactively work with private partners to improve the quality of life of

¹² “The Fed - Comparison: Compare Wealth Components across Groups.”

¹³ “Racial Differences in Economic Security: Housing.”

¹⁴ “Barriers to Accessing Homeownership Down Payment, Credit, and Affordability.”

American citizens, including helping lower their costs, reducing the risk of fraud, and improving their quality of medical care.

DECENTRALIZED IDENTITY

Verifying one's identity is essential to accessing fundamental services such as government programs, financial products, and medical care; this process can become even more secure through the use of blockchain and DLT. Traditionally, financial institutions run their own Know Your Customer (KYC), Know Your Business (KYB), and basic Customer Due Diligence (CDD) to Enhanced Due Diligence (EDD) processes to verify potential customers that would like to use their banking services. Unfortunately, the current process of verifying one's identity exposes individuals to mismanagement of highly sensitive data by multiple and often unknown parties, creates process and regulatory burden on private companies to securely manage the data, and creates the risk of theft and hacking of highly sensitive data which puts further burden on individuals, organizations, and the government.

Decentralized identity technology introduces the ability for the subject to take ownership in sharing this compliance information multilaterally with any financial institution they choose—enhancing essential privacy protection associated with personal identifying/entity identifying information (PII/EII), while providing a 'utility' for KYC/KYB verification near real time. The reuse of such information would decrease the cost and time required to securely onboard such a customer, while maintaining the subjects' control over their personal financial identity and account/wallet information. This empowers consumers with the authority to grant and withdraw their financial data, while streamlining compliance and decreasing costs for financial institutions. The result is a more widespread institutional adherence to regulatory compliance, as well as an overall increase in consumer data privacy and enabling secure and equitable financial inclusion—especially for those historically perceived as higher-compliance risk (e.g. low/moderate income, global poor, lack of financial/credit history, small businesses, international remittance and payments participants, etc.).

CONSUMER CREDIT REPORTS

The information conveyed in a credit report contains highly sensitive personal data and impacts both the approval and final cost a consumer incurs for rent, mortgage loans, automobile loans, and credit cards. DLT allow consumers to maintain a single verifiable identity on ledger that can be accessed and updated by parties who have permission. Currently, these reports are generated and managed by three main credit bureaus who aggregate and score data from businesses the consumer has previously used. However, this information is hidden from the consumer and often contains errors. To get a snapshot of their information or to dispute an error, a consumer must engage with each of the main credit bureaus, in an industry that still relies heavily on fax, phones and third parties. The process is time consuming, requires multiple follow-ups, and can jeopardize a consumer's ability to access necessary financial services and products.

DLT allow consumers to maintain a single verifiable identity on ledger that can be accessed and updated by parties who have permission. For example, instead of each credit bureau having a different set of information about a consumer stored on their servers, a consumer would have one on-ledger identity. Businesses that the consumer engages with can be given permission to augment the data, as with recent purchases, employment history, and other personal information. In this framework, consumers have a real-time snapshot of their digital identity, know what information has been shared, who it was shared by and when, and have the transparency they need to dispute inaccuracies.

CONSUMER DATA PRIVACY

The current way of shopping for financial products leads to consumers losing access to their personal information, however, DLT can help put control back into the hands of the consumer by creating a standard means by which any business can access sensitive data. For example, with a decentralized identity, consumers can grant access to their personal financial information when they are

shopping for a product or service, and revoke it once finished. Also, instead of having their full credit profile shared with businesses, consumers can give permission to a business to see only the information they need to make an accurate quote or approval. With decentralized identity, there is a single copy of a consumer's information with the information used, accessed and stored as-needed, and with consumers in control of that data.

STANDARDIZED MEDICAL RECORD KEEPING

In order to ensure an individual is receiving the best medical care, the parties involved, including care providers, insurers, hospitals, pharmacies, labs and others must operate on the same pieces of information which can be more securely identified, communicated and accessed through the use of DLT. Unfortunately, given the number of parties involved, and the sensitivity of the information, the fact that much of this information must be repeatedly collected and shared across providers means that there is a high risk of data degradation and inaccuracy. The federal government could conduct research on how to ensure a patient's medical record could be securely recorded and accessed across parties using DLT. This would ensure a higher quality of patient care and remove the many frictions that can occur in the onboarding and sharing of patient information.

STANDARDIZED PROPERTY RECORD KEEPING

The federal government could consider research on how to drive adoption of DLT for management of property records given the many unrelated parties who may have claims to a property, ranging from lenders with loans secured by the property to home renovators who have mechanics liens, and the need for a single, accessible source of truth. Currently, consumers are still required to pay for costs like title insurance to ensure that their ownership in a property is properly recorded. Given the average title insurance policy ranges from 0.5% to 1.0% of a property's value, consumers are spending thousands of dollars per transaction to verify and protect their ownership in an asset they just purchased. Widespread adoption of DLT for property recording would reduce the administrative burden on settlement agents to verify ownership, reduce home transaction delays, and save consumers thousands of dollars on their home purchase.

UTILITY OPERATING SYSTEMS

DLT systems can add new levels of security to utility operating systems (UOS) by leveraging their inherent features of decentralization, immutability, and transparency. The use of DLT systems can enable UOS to quickly detect and respond to any changes or disruptions in the system. Smart contracts can be used to automate processes, enabling deterministic responses to predefined conditions. This can eliminate the need for human intervention, reducing the risk of human error and enhancing the reliability of UOS.

DLT systems can enhance the security of UOS by providing enhanced access control mechanisms. Permissioned DLT networks can restrict access to authorized participants only, ensuring that only authorized individuals can access and modify the UOS. This can prevent unauthorized individuals or groups from accessing or manipulating the system, reducing the risk of data breaches, cyber attacks, or ransomware.

CONCLUSIONS

As the White House Office of Science and Technology Policy (OSTP) moves forward and weighs the value of digital assets as well as considers key areas of emphasis for further research, we encourage the OSTP to embrace the transformative power of Distributed Ledger Technologies (DLT) and digital assets, which are revolutionizing the way we interact with each other and with businesses. With appropriate research and through nurturing responsible innovation oriented digital asset industry firms, our country may leverage cutting-edge technologies to drive innovation, promote transparency, enable secure financial inclusive opportunities, and enhance economic growth.

GDCA appreciates the opportunity to comment on this important proposal and welcomes the opportunity to respond to any questions or inquiries.

Sincerely,

Gabriella Kusz
CEO
Global Digital Asset & Cryptocurrency Association (Global DCA)

**ADDITIONAL SIGNATORIES &
CONTRIBUTORS**

Shima Rayej
Co-founder and Chief Investment Officer,
Safe Rate
Policy Fellow, GDCA

Amit Sharma
Founder and CEO,
FinClusive Capital

Daniel Lis
Director of Public Policy,
GoQuant

Adem Peters
Digital Asset Accountant, Gordon Law Group
Policy Fellow, GDCA

Samuel Peters
Policy Fellow, GDCA