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7th Judicial Circuit
Sangamon County, IL
2026MR000271

**IN THE CIRCUIT COURT OF THE SEVENTH JUDICIAL CIRCUIT**
**SANGAMON COUNTY, ILLINOIS**

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| THE CHAMBER OF DIGITAL COMMERCE, D/B/A THE DIGITAL CHAMBER, ET AL.,<br>*Plaintiffs,*<br>v.<br>DAVID HARRIS, ET AL.,<br>*Defendants.* | Case No. 2026-MR-271 |

*Consolidated with*

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| BLOCKCHAIN ASSOCIATION AND CRYPTO COUNCIL FOR INNOVATION,<br>*Plaintiffs,*<br>v.<br>DAVID HARRIS, ET AL.,<br>*Defendants.* | Case No. 2026 MR 000312 |

**MOTION FOR LEAVE TO FILE AN *AMICUS CURIAE* BRIEF IN SUPPORT OF PLAINTIFFS**

Proposed Amici[1] respectfully submit this Motion for leave to file a brief as amici curiae in support of Plaintiffs, attached as Exhibit A.

The Proposed Amici are organizations and businesses that advocate for, build, develop, invest in, or support blockchain technology and digital asset services. Together, they bring experience with blockchain infrastructure, decentralized finance, and the software through which

[1] "Proposed Amici" refers to, collectively: Aave Labs; Andreessen Horowitz; Aptos Labs; Aztec Labs; Chainlink Labs; Decentralization Research Center; DeFi Education Fund; Dromos Labs; Figment Inc.; Hyperliquid Policy Center; Jito Labs; Multicoin Capital Management LLC; Paradigm Operations LP; Phantom Technologies; Solana Policy Institute; the Stand With Crypto Alliance; Uniswap Labs; and Orca Creative.

people hold and transact with digital assets. The Proposed Amici share an interest in ensuring that blockchain software developers, businesses, and users are subject to clear rules in order to promote healthy innovation and growth in the U.S. cryptocurrency industry.

The Proposed Amici have a strong interest in this case because clarity is lacking in the Illinois Digital Asset Tax Act. The Proposed Amici submit this brief in support of Plaintiffs to assist the Court in understanding how blockchain technology works, the technical capabilities of developers and providers, and how control over assets and transactions differs across the digital asset ecosystem.

**Proposed Amici**

The individual Proposed Amici are described below.

Aave Labs is a London-based technology company which builds blockchain-based products that power decentralized finance, including the Aave Protocol, the Aave-native stablecoin GHO, and Horizon, an institutional platform for borrowing against tokenized real-world assets.

Andreessen Horowitz ("a16z") is a venture capital firm that invests in seed, venture, and growth-stage technology companies. a16z currently has more than $100 billion in assets under management across multiple funds, with more than $9.8 billion in committed capital for crypto and other frontier technologies. In crypto, a16z primarily invests in companies using blockchain technology to develop protocols that others can build upon to launch internet businesses.

Aptos Labs is dedicated to creating network tooling and seamless usability for users of the Aptos network, a next-generation high-performance public Layer 1 blockchain.

Aztec Labs is a U.K.-based private limited company that builds products to facilitate privacy on decentralized blockchains.

Chainlink is the standard for onchain finance enabling high-quality data, secure cross-chain interoperability, and compliant connectivity across global markets.

The Decentralization Research Center is a 501(c)(4) social welfare nonprofit that advocates for decentralization as a fundamental characteristic of emerging technologies.

DeFi Education Fund is a U.S.-based nonpartisan nonprofit that advocates for sound policy for decentralized finance ("DeFi"), educates lawmakers about how DeFi works and the benefits it offers, and protects the rights of DeFi developers and users.

Dromos Labs is a development and infrastructure company which builds systems to facilitate efficient blockchain transactions.

Figment Inc. is a leading independent provider of staking infrastructure.

Hyperliquid Policy Center is a U.S.-based independent research and advocacy organization dedicated to advancing a clear, regulated path for Americans to access on chain markets.

Jito Labs is a software development company that builds trading optimization software for the Solana blockchain.

Multicoin Capital Management LLC is an investment firm that invests in digital assets and blockchain-related companies seeking to reshape trillion-dollar markets.

Paradigm Operations LP is a frontier technology investment firm that invests and builds in crypto, AI, robotics, and other new frontiers. Paradigm pairs investing with hands-on technical work: it builds and maintains open-source software relied on across the crypto ecosystem, and it works alongside its portfolio companies on product, business, and policy strategy.

Phantom Technologies is a California-based software development company which provides non-custodial wallet software where users can store, trade, and send their crypto.

Solana Policy Institute is a non-partisan, non-profit focused on educating policymakers on how decentralized networks like Solana are the future of the digital economy—and why the people building on and using them need legal certainty to flourish.

The Stand With Crypto Alliance, a 501(c)(4) nonprofit, champions for clear, common-sense regulations for the crypto industry by mobilizing the 67 million crypto owners in the U.S.

Uniswap Labs is a New York-based software development company that contributes to the development of the Uniswap Protocol, a decentralized, open-source automated market maker protocol launched in 2018. The protocol lets people trade digital assets peer to peer, directly from their own self-custodial wallets, without intermediaries, and it has processed more than $4 trillion in trading volume. Uniswap Labs also develops noncustodial software products, including a web interface, a wallet, and developer tools, that give millions of users access to DeFi. Uniswap Labs does not take custody of user assets, and users' transactions execute through smart contracts that Uniswap Labs does not control.

Orca Creative is a software development company that has contributed to a number of blockchain-based applications, including the Orca Protocol, a leading decentralized automated market maker smart contract built on the Solana blockchain network.

**Argument**

A court may allow the filing of an amicus curiae brief under Illinois Supreme Court Rule 345. Proposed Amici respectfully submit that their brief provides useful context regarding the effect of the challenged act on non-custodial blockchain transactions, which will add to the perspectives of the parties in this matter, and the participation of Proposed Amici will aid the Court in its evaluation of the issues before it. The proposed brief explains how the Illinois Digital Asset Tax Act is vague and overbroad, particularly with respect to non-custodial blockchain actors, as

well as unlawfully discriminatory against financial activity conducted through blockchain technology.

Proposed Amici have conferred with counsel for Plaintiffs, who do not oppose this Motion.

In conclusion, the Proposed Amici respectfully request that this Court grant leave to file the attached amici curiae brief in support of Plaintiffs.

Dated: November 11, 2026

Respectfully submitted,

*/s/ Ning He*

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## CERTIFICATE OF SERVICE

I certify that on November 11, 2026, a true and correct copy of the forgoing Motion for Leave to File an *Amicus Curiae* Brief in Support of Plaintiffs was served upon counsel of record via the Court's electronic filing system and electronic mail.

*/s/ Ning He*
Ning He (#6322575)

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# EXHIBIT A

**IN THE CIRCUIT COURT OF THE SEVENTH JUDICIAL CIRCUIT**
**SANGAMON COUNTY, ILLINOIS**

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| THE CHAMBER OF DIGITAL COMMERCE, D/B/A THE DIGITAL CHAMBER, ET AL.,<br>*Plaintiffs,*<br>v.<br>DAVID HARRIS, ET AL.,<br>*Defendants.* | Case No. 2026-MR-271 |

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| BLOCKCHAIN ASSOCIATION AND CRYPTO COUNCIL FOR INNOVATION,<br>*Plaintiffs,*<br>v.<br>DAVID HARRIS, ET AL.,<br>*Defendants.* | Case No. 2026-MR-312 |

# BRIEF OF DIGITAL ASSET INDUSTRY ORGANIZATIONS AND BUSINESSES AS *AMICI CURIAE* IN SUPPORT OF PLAINTIFFS


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## INTEREST OF *AMICI CURIAE*

*Amici curiae*, listed below, are organizations and businesses that advocate for, build, develop, invest in, or support blockchain technology and digital asset services. Together, they bring experience with blockchain infrastructure, decentralized finance, and the software through which people hold and transact with digital assets. Amici share an interest in ensuring that blockchain software developers, businesses, and users are subject to clear and appropriate rules in order to promote healthy innovation and growth in the U.S. digital asset industry. Amici have a strong interest in this case because these qualities are lacking in the Illinois Digital Asset Tax Act. Amici submit this brief in support of Plaintiffs to assist the Court in understanding how blockchain technology works, the technical capabilities and controls of developers and providers, and how the Tax Act's broad definitions fail to account for the technical realities of the technology, and the Act as a whole discriminates against the digital asset industry.

*Amici* include:

Aave Labs
Andreessen Horowitz
Aptos Labs
Aztec Labs
Chainlink Labs
Decentralization Research Center
DeFi Education Fund
Dromos Labs
Figment Inc.
Hyperliquid Policy Center
Jito Labs
Multicoin Capital Management LLC
Orca Creative
Paradigm Operations LP
Phantom Technologies
Solana Policy Institute
Stand With Crypto
Uniswap Labs

## INTRODUCTION

An explanation of the relevant technology demonstrates why the Illinois Digital Asset Tax Act's (the "Act") tax on "digital asset business activity" is vague, overbroad, and unadministrable. Blockchain technology enables people to execute financial transactions themselves, without seeking permission or relying on centralized intermediaries to maintain custody and control of their assets or conduct financial activities on their behalf. Using the internet, a blockchain user can authorize a payment, make a peer-to-peer asset exchange, or communicate data using software and network infrastructure supplied by others, all while maintaining custody and control over their own assets and data. Accordingly, many blockchain infrastructure providers merely provide software and neither serve as the custodian of assets nor facilitate transactions on behalf of customers.[1]

The Act fails to account for the technological complexities of the digital asset ecosystem. The Act's broad definition of "digital asset business activity" and included sub-activities are so sweeping that it is impossible to apply them in practice.[2] The vague and interwoven definitions create uncertainty as to who will be treated as a digital asset broker and what qualifies as digital asset business activity. The consequences of these vague and overbroad terms have already been made clear: the Act's definitions were read in a legally invalid manner by the Illinois Department of Revenue, sweeping in developers, providers, and other network participants who would not be able to collect a tax from customers they do not have, direct payments from assets they do not control, or determine a transaction's location from information they do not have.

[1] DeFi Educ. Fund, *DeFi 101* 5–9, 17 (July 22, 2025), https://shorturl.at/V3ahK ("DEF DeFi 101").
[2] 35 Ill. Comp. Stat. 195/3-15 (2026) (defining "[c]ustomer," "[d]igital asset business activity," "[e]xchange," "[s]tore," and "[t]ransfer").

The Act also impermissibly taxes the same economic activities differently simply because they involve assets recorded on a blockchain available only through the internet, which the Illinois Constitution and federal law prohibit.

Below, Amici explain how blockchain technology works and who, if anyone, performs the activities it enables. The realities of blockchain technology and related software exemplify why the Act's definition of digital asset business activity is vague and overbroad, and its treatment of financial activity conducted through blockchain technology is not only inapposite but discriminatory.

## ARGUMENT

### I. HOW THE BLOCKCHAIN RECORDS AND PROCESSES DIGITAL ASSET TRANSACTIONS

A public blockchain is a shared digital ledger accessible through the internet. The blockchain records data in permanent, linked batches called "blocks." Each entry on the ledger, called a "transaction," reflects information being shared or an action taking place, such as a transfer from one wallet address to another or the deployment of a smart contract.[3] Unlike traditional financial transactions, public blockchain transactions are recorded on an immutable ledger that is visible to anyone with an internet connection.[4]

The ledger is maintained by many independent computers called "nodes," which communicate directly with one another using the internet, rather than through a central server. In contrast to a traditional website or financial institution, no single company or person controls a public distributed ledger network. Depending on its role, a node may store all or part of the

[3] Smart contracts are a specialized type of software application whose code executes automatically and autonomously based on user instructions when pre-determined conditions are met.

[4] *See* David W. Perkins, Cong. Rsch. Serv., R45427, *Cryptocurrency: The Economics of Money and Selected Policy Issues* at 7 (Apr. 9, 2020), https://perma.cc/G8UA-SXD6.

blockchain's history, and the node operators keep that data publicly available so that anyone can confirm each transaction and update is valid.

A blockchain's "protocol" is its rulebook. It defines what counts as a valid transaction, how transactions are grouped into blocks, and how participants agree on the ledger's current state. The rules are precise: Independent people running the software will each reach the same result.[5] On a public, permissionless blockchain, no single person or entity can unilaterally control who may use the network, how agreement is reached, or what the ledger says. Changes to the rules are proposed, debated, approved, and effected through a process spread across many disparate participants, including validators, node operators, users, token holders, and stakers.

The assets recorded on a blockchain are known as "digital assets." A "native asset" or "network token" such as bitcoin on the Bitcoin network or ether on the Ethereum network, is built into a network's design: it is used in the network's operation and is issued to reward the miners or validators who participate in the consensus mechanism of the network. However, many other "tokens" are created for vastly different purposes and exist across different networks.[6] Some digital assets provide voting rights over protocols or networks, represent ownership interests in other

[5] The rules by which participants agree on the ledger's "state" make up the network's "consensus mechanism." Two consensus mechanisms predominate. Used by Bitcoin, "proof of work" consensus involves participants called "miners" competing to propose and add the next block of transactions. Under the second approach, "proof of stake," used by networks like Ethereum and Solana, participants called "validators" lock up the network's own token as a stake, which serves as collateral. For each new block, a validator is selected to propose it under the protocol's rules, while other validators vote, or "attest," on whether it is valid. Validators earn rewards for this work, and a validator that breaks the network's rules on certain networks can have part of its stake automatically taken away, a penalty known as "slashing." Whatever the method, the purpose of the consensus mechanism is the same: verifying instructions and updating a shared record.

[6] *ERC-20 Token Standard*, Ethereum (October 21, 2026), https://ethereum.org/developers/docs/standards/tokens/erc-20/ (sections titled "Introduction" and "Body"); *Assets on Solana*, Solana, https://solana.com/docs/tokens (last visited Oct. 28, 2026) (sections titled "Token Programs," "Mint Account," and "Token Account"); DeFi Educ. Fund, *DeFi Tech Explainer* (Sept. 2025), https://shorturl.at/1ryrQ.

assets, or serve primarily as speculative assets.[7] Two assets that exist on the same network are therefore not economically equivalent simply because they are traded on the same infrastructure.[8]

**Appendix A depicts a typical blockchain transaction in which a user retains control over their assets, showing how the functions described above work together**: First, the user leverages wallet software and a private key[9] to sign instructions and submit them to the network. The signature relies on "public key cryptography," mathematical techniques that allow others to verify the signature is valid without learning the private key. Computers operated by network participants then share and check the instructions and that the user has enough assets to send. Other participants use software to check the proposed block, and validators follow the network's "consensus" rules to establish the transaction history. These are distinct functions: the user creates and authorizes the transaction, while network participants operate the computers that process, validate, and record it. Networks differ in the details, but the basic sequence is similar.

Blockchain networks and software built on them offer these benefits to market participants while mitigating many of the intermediary-related risks that financial regulation was designed to address. In systems without an intermediary, no person can arbitrarily freeze funds, alter rules without consensus, or extract value through opaque fee structures. Users can retain control over

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[7] *See* U.S. Sec. & Exch. Comm'n, *Application of the Federal Securities Laws to Certain Types of Crypto Assets and Certain Transactions Involving Crypto Assets*, Release No. 33-11412, Section III (Mar. 17, 2026) (describing the different characteristics, purposes, and functions of digital assets, including digital commodities, digital collectibles such as memecoins, digital tools, stablecoins, and digital securities). Illinois law already recognizes that tokens are not monolithic. The Digital Assets and Consumer Protection Act excludes from the definition of "digital asset" representations of value with substantial value, utility, or significance beyond their mere existence as a digital asset, including works of art and similar intellectual property, collectibles and merchandise, and licenses, tickets, and similar rights. Digital Assets and Consumer Protection Act, 205 Ill. Comp. Stat. 731/1-5(a) (2026).

[8] Brief of Amicus Curiae Paradigm Operations LP at 5–7, *Bprotocol Found. v. Universal Navigation Inc.*, No. 1:25-cv-04214 (S.D.N.Y. Sept. 4, 2025), ECF No. 64, https://shorturl.at/acnN4.

[9] A private key is a unique cryptographic code that enables its holder to authorize transactions involving digital assets associated with a particular blockchain address. It functions similarly to a highly secure digital signature, allowing the holder to demonstrate control over those assets and approve their transfer without requiring authorization from a bank or other intermediary.

their assets through self-custodial wallets. Transactions are settled based on code, not subjective human discretion. Finally, pricing is determined through automated mechanisms or by users directly, not behind-the-scenes negotiations or traditional intermediary order handling. In this way, these systems can achieve many regulatory goals by design.[10] And importantly, every blockchain transaction a user conducts must occur over the internet.

## II. BLOCKCHAIN PARTICIPANTS VARY IN CONTROL OVER DIGITAL ASSET TRANSACTIONS

The digital asset ecosystem includes many different participants who create and provide different technologies that enable a blockchain network and the software built on top of it to function. It is important to distinguish participants by their level of control over technology and assets, particularly in open-source software development, where many software developers often work on different components of a network at various times. For example, the developer who works on a smart contract protocol is often different from the developer who builds a user interface that accesses the protocol. These distinct components are discussed in detail below and depicted in **Appendix B (The Digital Asset Ecosystem)**.

### A. Base Layer or Infrastructure Providers

The base layer refers to the public, permissionless blockchain itself: general-purpose, automated network infrastructure that runs according to transparent rules, with no intermediary controlling access to the network, how it operates, or the ability to build on top of it. **Appendix C (The DeFi Technology Stack)** depicts these layers, from the base layer blockchain up through

[10] *See* Letter from Uniswap Labs to Hon. Hester M. Peirce & Members of the Crypto Task Force, U.S. Sec. & Exch. Comm'n, *Re: Automated Market Makers and the Application of the Federal Securities Laws* 3, 6 (July 10, 2026), https://www.sec.gov/files/ctf-written-input-uniswap-071026.pdf (explaining that in an automated market maker, trade outcomes follow the protocol's predefined rules with no actor other than the user exercising discretion, and that AMMs disaggregate the order-flow, pricing-discretion, and information functions that traditional intermediaries concentrate in a single institution, reducing the conflicts of interest and single points of failure that justify intermediary regulation).

smart contracts, interfaces, and wallets. As described above, the network participants relevant to this layer relay, validate, order, execute, and record transactions, and reach consensus on the state of the ledger.[11] The base layer's source code and rules are public, so anyone with an internet connection can inspect the code, submit transactions, deploy applications, and view its data. It runs automatically and predictably: the same inputs always produce the same outputs. Once finalized, the blockchain's record cannot be altered by any single participant. It is maintained by many independent participants rather than owned or controlled by a central authority. The blockchain is credibly neutral, meaning no one has protocol-level authority to discriminate against a particular user or transaction. And it is noncustodial: Base layer providers do not have control of user assets by virtue of performing these functions.

### B. Centralized Exchanges

The vast majority of digital asset transactions happen on a "centralized exchange," which works like a traditional brokerage but incorporates blockchain technology. A centralized exchange typically controls its customers' digital assets in accounts it maintains, much as a broker custodies and controls its customers' securities. Because the exchange operator controls customer accounts, customers must rely on the exchange to access or transfer their assets. When a customer places an order, the exchange matches and executes trades and updates its internal records.[12] Trades may be reflected in the exchange's internal ledger, with public blockchains used for deposits and withdrawals.[13] The exchange operator has customer relationships: it knows who its customers are, collects their information, and each relationship is governed by an account agreement. As with a

[11] DEF DeFi 101 at 5–7.
[12] DEF DeFi 101 at 8, 17.
[13] President's Working Grp. on Digital Asset Mkts., *Strengthening American leadership in digital financial technology* 19–23, 34 (2025), https://shorturl.at/lzG6R ("PWG Report").

traditional brokerage account, a customer's claim to assets held on the exchange depends on that relationship and those agreements.

### C. DeFi

Another important part of the digital asset ecosystem is decentralized finance, or "DeFi." DeFi refers to financial applications built on public blockchains that allow people to engage in self-directed, peer-to-peer financial transactions without relying on intermediaries and while maintaining custody and control over their own funds.[14] The developer of a DeFi protocol does not have a customer relationship with end users, or receive or carry out user requests.[15] DeFi applications or "protocols" are created by developers publishing "smart contracts," a specialized software that runs automatically, based on user instructions, when preset conditions are met.

A "decentralized exchange," or "DEX," is one type of DeFi protocol that lets users swap assets peer-to-peer. A DEX is not a company or other entity, but a software system of smart contracts running on a public blockchain. Through a DEX, people can trade one digital asset for another directly from their own self-custodial wallets, without a company custodying their assets, carrying out the trade, or otherwise controlling their assets or transactions.[16] In some DEXs, buyers and sellers match through an order book kept on the blockchain itself. Other DEXs include "liquidity pools," which are reserves of digital assets funded by "liquidity providers," who deposit

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[14] DEF DeFi 101 at 4.

[15] *See* Letter from DeFi Educ. Fund & Andreessen Horowitz to Hon. Hester M. Peirce, Comm'r, U.S. Sec. & Exch. Comm'n, *Re: Recommendations Regarding a Safe Harbor for Certain Applications from the Exchange Registration Requirement of the Securities Exchange Act of 1934* 8-9, 20–21 (Sept. 14, 2026), https://shorturl.at/7xYYj; Letter from DeFi Educ. Fund & Andreessen Horowitz to Hon. Hester M. Peirce, Comm'r, U.S. Sec. & Exch. Comm'n, *Re: Recommendations Regarding a Safe Harbor for Applications from the Broker Registration Requirements of the Securities Exchange Act of 1934* 21–23 (Aug. 13, 2025), https://shorturl.at/ihO3g ("Broker Proposal"). These public proposals are cited for their technical explanations, not as adopted law or an Illinois legal test.

[16] DeFi Educ. Fund, *Decentralized Exchanges*, https://shorturl.at/s9UKW (last visited Oct. 28, 2026).

assets into pools so that others can trade against them.[17] An "automated market maker," or "AMM," sets prices by applying a preset formula to a pool's reserves.[18] In the "constant-product" design used by Uniswap v2, for example, an asset's price rises as it becomes scarcer in the pool.[19]

Aside from DEXs, users can engage with other DeFi protocols to lend and borrow digital assets without relying on traditional financial intermediaries. In DeFi lending protocols, users supply digital assets to liquidity pools from which other users can borrow, generally subject to predefined collateral requirements and interest rates determined by the protocol's rules.[20]

### D. User Interface Providers

User interfaces are front-end websites or applications that provide read and write access to a smart contract protocol and consist of code entirely separate from the protocol itself. Because of this, user interfaces are referred to as "off-chain," meaning they are typically maintained by the developers who built them, are stored by a centralized cloud provider (such as Amazon Web Services), and operate only so long as their developers provide for their maintenance and upkeep. Providers of user interfaces related to non-custodial applications and protocols do not custody or control user funds, and do not typically have an "account" relationship with a customer. Nor do they execute transactions on behalf of users.

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[17] See Aerodrome Finance, *Liquidity*, https://app.aero.xyz/docs/products/liquidity (last visited Nov. 10, 2026); Uniswap Labs, *Liquidity Overview*, https://developers.uniswap.org/docs/liquidity/overview#1-liquidity-provisioning (last visited Nov. 10, 2026).

[18] *See* Uniswap Labs, *What is an Automated Market Maker?* (May 1, 2025), https://blog.uniswap.org/what-is-an-automated-market-maker; *see also* Aerodrome Finance, *Glossary*, https://app.aero.xyz/docs/about/glossary (last visited Nov. 10, 2026) (entry titled "AMM (Automated Market Maker)").

[19] Hayden Adams, Noah Zinsmeister & Dan Robinson, *Uniswap v2 Core* § 1 (Mar. 2020), https://uniswap.org/whitepaper.pdf; DEF DeFi 101 at 12–13.

[20] Morpho, *What Is Morpho? The Open Credit Network for Crypto Lending*, https://morpho.org/what-is-morpho (last visited Oct. 30, 2026); Aave, *Introduction to Aave v3*, https://aave.com/help/aave-101/introduction-to-aave (last visited Nov. 10, 2026). Additionally, a user can leverage "vaults," which are smart contracts that automatically allocate digital assets according to predefined rules or strategies, allowing users to participate in activities such as lending, liquidity provision, or yield generation without requiring a centralized intermediary to custody their assets or execute transactions on their behalf. *See, e.g.*, *Yearn Products*, Yearn Docs, https://docs.yearn.fi/getting-started/intro (last visited Nov. 10, 2026).

When conducting a DeFi transaction, a person can use a user interface or app that makes it easier to interact with the relevant smart contracts. A user interface typically serves two roles: as a browser and as a data object generator. In its browser role, the interface shows information about the blockchain's state and provides an intuitive visual interface for users to indicate the actions they would like to perform. In its data object generator role, a user interface "translates" the user's input into a data object, *i.e.*, a set of data with the necessary information to submit a blockchain transaction. Typically, user interfaces with data object generators include a "connect wallet" button, which, when selected, establishes a secure connection between the user interface and the user's crypto wallet, and formats user instructions as a message for the user to review.[21] If the user approves, they sign the message and send it to the network through the wallet, and the transaction executes under the protocol's code and is recorded on the blockchain. Throughout, the user alone decides whether to go forward.

Control over a user interface does not equate to control over the underlying protocol or the blockchain. In other words, user interfaces provide a way to access a protocol, but do not control the protocol's functions or alter one's ability to access the underlying protocol by other means.

### E. Wallet Providers

People interact with blockchains through "wallets," software tools that enable users to custody and control their digital assets. A "wallet" is a pair of numbers—a private key and a public key—that a person needs to interact with a blockchain.[22] The public key, or an "address" derived

[21] Broker Proposal at 8–10; DeFi Educ. Fund, *Front-Ends*, https://www.defieducationfund.org/docs/educational/explainers/front-ends/ (last visited Oct. 28, 2026).

[22] A private key is nothing more than a randomly selected number in a range that is astronomically large. *See* Brief of DeFi Education Fund as Amicus Curiae at 3–6, *SEC v. Coinbase, Inc*., No. 1:23-cv-04738 (S.D.N.Y. Aug. 11, 2023), ECF No. 60 ("DEF Coinbase Brief"). A public key is derived from the private key using publicly available cryptographic formulas, and the relationship runs "one way": the private key determines the public key, but the public key can never be used to find the private key. *Id.*

from it, works like an email address that can be shared freely so others know where to send assets. The private key works like the password, which only the owner knows. A person authorizes a transaction by attaching a "digital signature" created with the private key, which anyone can check against the public key.[23] Because any instruction signed with the correct private key is carried out automatically and irreversibly, controlling a private key is, in practical terms, the same as owning and controlling the assets it unlocks.

A "wallet application," by contrast, is software that helps a person manage those numbers. It typically helps the user (1) select a private key, or import one previously selected, and derive the public key; (2) store the private key on the user's own device; (3) sign transactions with that key; and (4) send the signed transactions over the internet. All of this happens locally, on the user's device, though certain wallet applications are connected to the internet. A non-custodial wallet application developer cannot exercise any judgment or control over the user's wallet or crypto assets. Treating that developer as controlling users' assets would be like treating a web browser developer as controlling what users of the browser do online.[24]

When the individual user, rather than an exchange or other service, controls their own private key, the user's wallet is "non-custodial" or "self-custodial." The user can authorize transactions without permission from a bank or other intermediary, and without giving the wallet application's developer any power over those transactions.[25] In contrast, a "custodial wallet" refers to an arrangement where a centralized service or provider controls the private keys to a user's wallet, and therefore controls the assets in a similar way to a bank controlling the funds in a customer's account. The custodial provider acts on the user's instructions, and the user relies on

[23] *Id.*
[24] DEF Coinbase Brief at 4, 6–7.
[25] Broker Proposal at 16–17; DEF DeFi 101 at 8, 17; DeFi Educ. Fund, *Noncustodial Wallets*, https://shorturl.at/xnMCW (last visited Oct. 28, 2026).

that provider rather than independently authorizing transactions.[26] Both products may be called wallets, but they allocate authority very differently.

**Appendix B (The Digital Asset Ecosystem)** illustrates the difference: in the centralized model, the business holds assets and authorizes transactions for its customers, but in the self-custodial model, the user controls the private key. Using a basic analogy, cash in a person's bi-fold wallet is "self-custodied," whereas a person's cash held by a bank on their behalf is "custodied" by a third-party. In both instances, the cash belongs to the person; the difference lies in whether the owner of the cash has free access to and independent control over it.[27]

Accordingly, to understand a particular wallet application developer's role, it is important to examine what the provider actually controls: whether they simply supply software through which users authorize their own transactions or whether they can actually authorize transfers of user assets. Developing and publishing wallet software does not, by itself, give the developer control over assets or transactions.

## III. THE DEFINITION OF DIGITAL ASSET BUSINESS ACTIVITY IS IMPERMISSIBLY VAGUE AND OVERBROAD

The Act fails to establish sufficiently clear boundaries between taxable digital asset business activity and the provision of software and network infrastructure that enables users to transact independently. As explained above, the digital asset industry is technologically complex—transactions may involve numerous distinct participants, including custodial and non-custodial exchanges, smart contract developers, user interface providers, wallet software developers, and network validators. Although each participant may contribute to the execution of a digital asset

[26] DEF DeFi 101 at 8, 17; Broker Proposal at 16–17.

[27] *See* Daniel Barabander et al., *Secret Notes And Anonymous Coins: Examining FinCEN's 2019 Guidance On Money Transmitters In The Context Of The Tornado Cash Indictment*, Int'l Acad. of Fin. Crime Litigators (Sept. 2023), https://tinyurl.com/5a7mepnb.

transaction, their respective relationships with users, access to transaction information, and ability to control assets differ fundamentally. The Act does not adequately account for these distinctions.

Furthermore, the breadth of the definition of digital asset business activity could be impermissibly misconstrued as encompassing a wide variety of blockchain transactions, rendering unclear which developers, providers, or other participants fall within the scope of the Act. The Act defines "digital asset business activity" as "any single occurrence of exchanging, transferring, or storing a digital asset as part of a business or on behalf of a customer who has entered into an agreement with a business for the provision of those services."[28] In turn, "storing" is defined as "stor[ing], hold[ing], or maintain[ing] custody or control of a digital asset on behalf of a customer by a digital asset broker."[29] "Transfer" is defined as including the movement of a "digital asset from one account or storage of a customer to another account or storage of the same customer."[30] An exchange is any exchange, purchase, sale, trade, or conversion between one or more forms of digital assets and/or fiat currency that is made on behalf of a customer.[31] The liberal use of the word "or" in each of these definitions renders them impossible to apply in practice.

The practical consequences of the Act's vagueness are illustrated by the Illinois Department of Revenue's draft proposed regulations.[32] The proposed regulations define a digital asset broker directly contrary to the proscriptions of the Act and incorporated federal regulations,[33]

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[28] 35 Ill. Comp. Stat. 195/3-15.
[29] *Id.*
[30] *Id.*
[31] *Id.*
[32] Ill. Dep't. of Revenue, Notice of Proposed Rule (Sept. 28, 2026) (to be codified at 88 Ill. Adm. Code § 497.101).
[33] *See* Treas. Reg. § 1.6045-1(a)(1), (g)(4)(i)(A), and (b)(2) Ex. 2, (ii), (ix), and (x) (defining a digital asset broker as a person that effects sales of digital assets for customers in its trade or business and expressly excluding persons solely engaged in validating transactions or providing noncustodial wallet software).

expanding the Act to reach certain decentralized finance exchanges in a legally invalid manner.[34] These proposed regulations illustrate how the Act's definitions of exchanging, transferring, or storing are vague and can be impermissibly broadened to apply to a multitude of blockchain activity, including that occurring without a custodial intermediary. A statute is void for vagueness if it is "so vague that it fails to give ordinary people fair notice of the conduct it punishes, or so standardless that it invites arbitrary enforcement."[35] Given that at least one regulator has already interpreted the Act contrary to the scope of activity the Act subjects to tax, it is unlawfully vague. Further, the interpretative problem cannot be cured by reissuing proposed regulations because the underlying vagueness is baked into the statute.

Under the agency's erroneous interpretation, developers and providers that lack custody of user assets, customer account relationships, or access to customer-location information could face obligations they have no practical ability to perform. Unlike a traditional broker, who is a person responsible for carrying out transfers of digital assets on another's behalf, developers and providers of non-custodial software keep no accounts or customer records and have no technological ability to collect or store them. Nor does the blockchain itself supply customer information. Anyone can see every transaction recorded on a public blockchain, but the record shows only wallet addresses, amounts, and transaction data. It contains no home or business address, mailing address, internet protocol address, or "place of primary use," the information from which Section 3-25 of the Act presumes that a customer is located in Illinois.[36] Reading the Act to reach such developers, interface providers, and network participants would tax people who write software that others use

[34] *See* Andreessen Horowitz, DeFi Educ. Fund, and Uniswap Labs, *Comments on Draft Proposed Rules Implementing the Digital Asset Tax Act*, 86 Ill. Adm. Code Part 497 (posted September 28, 2026), https://shorturl.at/gc1Uh.
[35] *Johnson v. United States,* 576 U.S. 591, 595 (2015) (citing *Kolender v. Lawson*, 461 U.S. 352, 357–58 (1983)).
[36] 35 Ill. Comp. Stat. 195/3-25.

to transact for themselves. Those actors have no customers to collect from, no assets to remit from, and no way to know where a transaction occurred. Therefore, the Act is not only impermissibly vague but overbroad and unadministrable in reaching parties who are unable to comply. These uncertainties are particularly consequential because the Act attaches criminal penalties to statutory violations, amplifying that the Act must sufficiently define who is required to comply.

## IV. THE TAX ACT DISCRIMINATES AGAINST THE DIGITAL ASSET INDUSTRY

Finally, the Act impermissibly taxes the same economic activities differently simply because they involve assets recorded on a blockchain. As Plaintiffs explain, "[t]he Act taxes only digital-asset activities, and it does not work like any conventional tax."[37] Comparable activity involving traditional assets is not taxed in this manner. "Illinois does not tax the exchange, transfer, or storage of precious metals, stocks, or bonds," and "[s]toring U.S. dollars at a bank is tax-free, while storing Bitcoin with a broker is taxed."[38] Yet "[i]n each case, the actual economic activity—exchanging, transferring, or storing assets—is the same."[39] The Act thus singles out transactions involving blockchain technology for unfavorable tax treatment and affects a substantial number of Illinois residents: an estimated 2.64 million Illinoisans hold digital assets, the fifth-highest total of any state.[40]

This disparate treatment is prohibited by the Illinois Constitution and federal law barring discrimination against internet commerce. The Illinois Uniformity Clause states: "In any law classifying the subjects or objects of non-property taxes or fees, the classes shall be reasonable and

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[37] Compl. ¶ 1, *Blockchain Ass'n v. Harris*, No. 2026 MR 000271 (Ill. Cir. Ct. Sangamon Cnty. Aug. 21, 2026) ("BA Compl.").

[38] Pls.' Mem. of Law in Support of their Mot. for Summ. J. at 22, *Blockchain Ass'n v. Harris,* No. 2026 MR 000271 (Ill. Cir. Ct. Sangamon Cnty. Nov. 4, 2026).

[39] BA Compl. ¶ 102.

[40] Nat'l Cryptocurrency Ass'n., *Where Crypto Holders Live* (May 2026), https://nca.org/resources (interactive map drawn from the 2026 State of Crypto Holders Report) (estimating 2.64 million crypto holders in Illinois, behind only California, Texas, Florida, and New York).

*the subjects and objects within each class shall be taxed uniformly*."[41] Imposing a tax on transactions conducted digitally, while transactions involving physical assets remain tax-free, violates the requirement that tax be imposed uniformly within classes. Similarly, the Internet Tax Freedom Act (IFTA), forbids "discriminatory taxes on electronic commerce" conducted over the internet that are not imposed on "transactions involving similar property, goods, services, or information accomplished through other means."[42] Taxing blockchain technology, which is available only on the internet, also imposes discriminatory taxes on electronic commerce.

Accordingly, the Court should find the Act to be unlawful in violation of the Uniformity Clause and the IFTA.

## CONCLUSION

Blockchain networks and the applications built on them allow people to transact without entrusting their assets to an intermediary. Users rely on technology that others supply, but those contributions do not give every provider control over users' assets, discretion over their transactions, or an undertaking to act for a customer. These distinctions matter to developers and users alike. Yet, the Act does not account for these distinctions. Moreover, the Act is impermissibly vague because digital asset ecosystem participants cannot divine whether they meet the Act's broad definitions.

Finally, the Act cannot discriminatorily subject these internet-based providers to tax while leaving similar physical financial transactions untouched, simply because they allow others to transact using blockchain technology. Amici respectfully request the Court find these infirmities render the Act unlawful and unenforceable.

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[41] Ill. Const. art. IX, § 2 (emphasis added).
[42] 47 U.S.C. § 151 note (Pub. L No. 105–277, H.R. 4328, (Oct. 21, 1998) ITFA §§ 1101(a)(2), 1105(2)(A)(i), 1105(3)).

Dated: November 11, 2026

Respectfully submitted,

*/s/ Ning He*

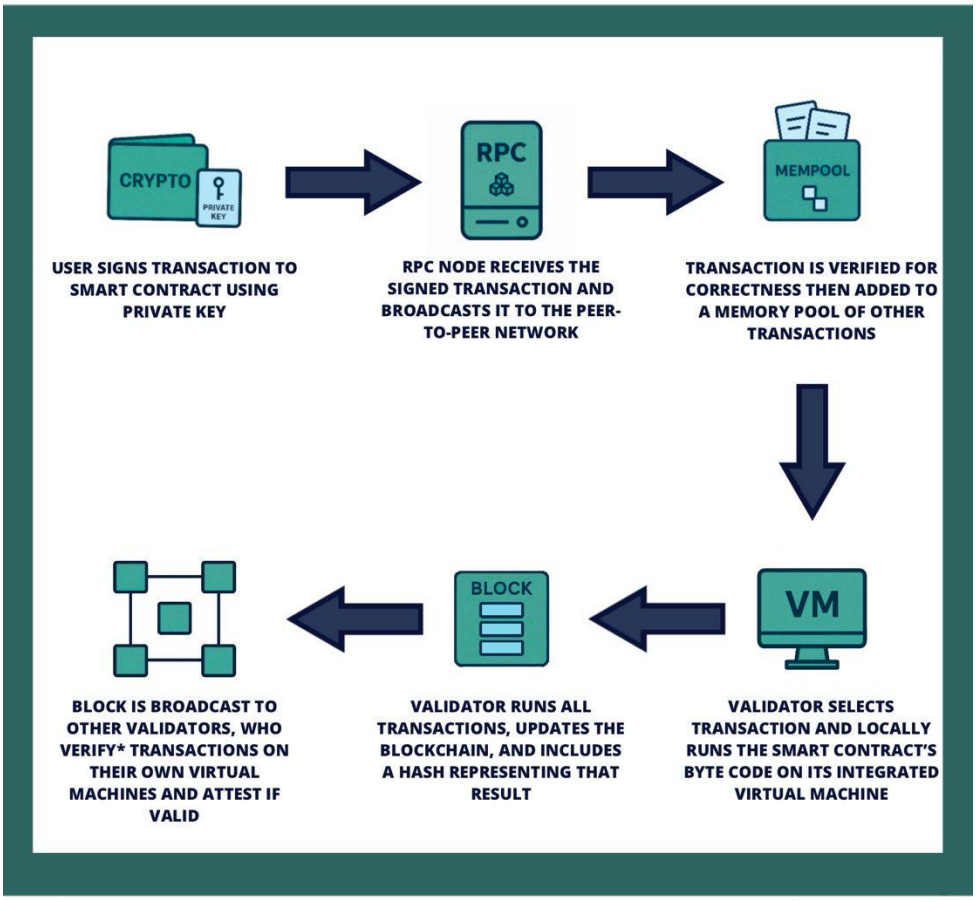
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**APPENDIX A – Anatomy of a DeFi Transaction**

DEF
DeFi Education Fund

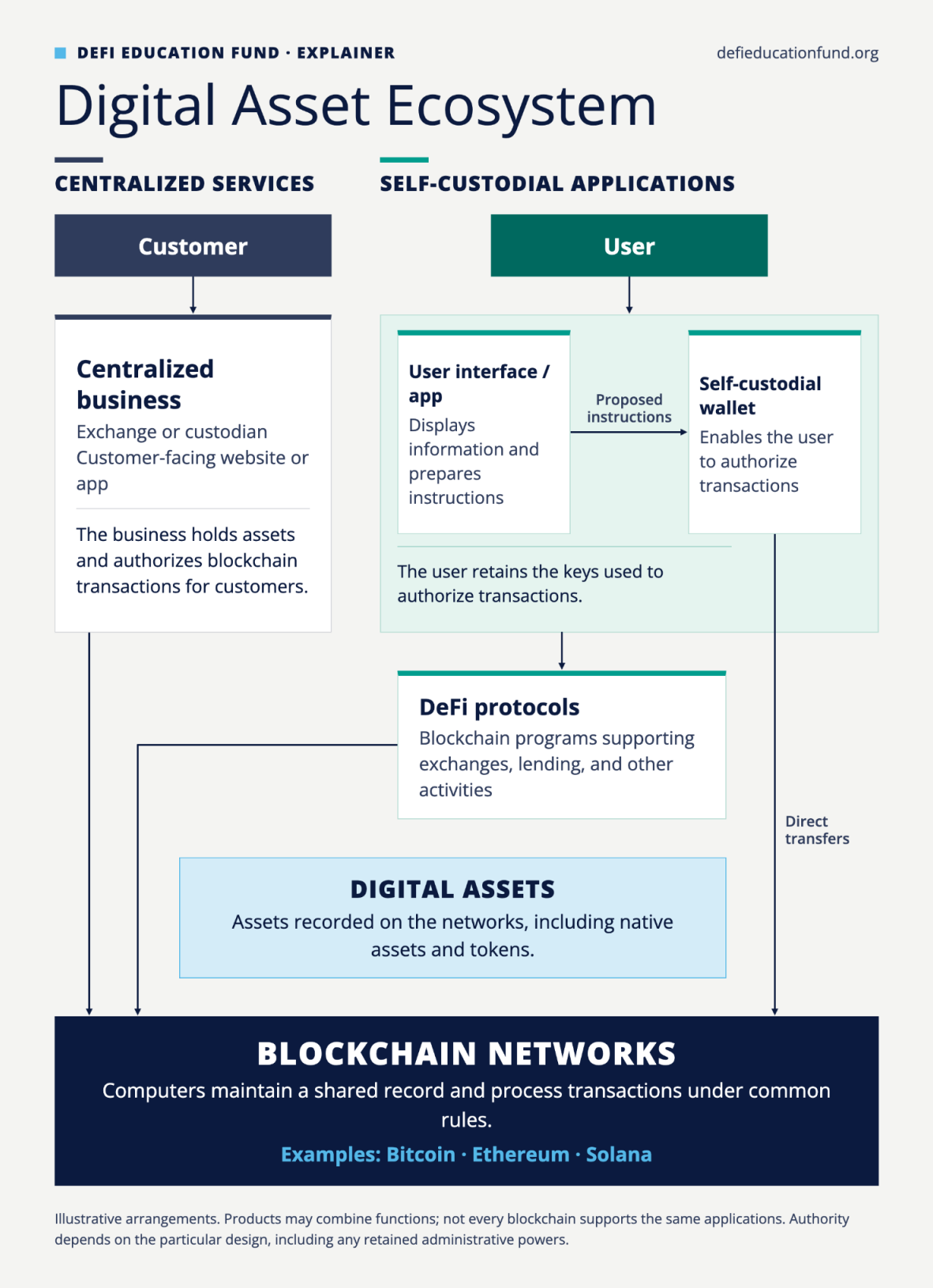
# Decentralized Finance Transaction Flow



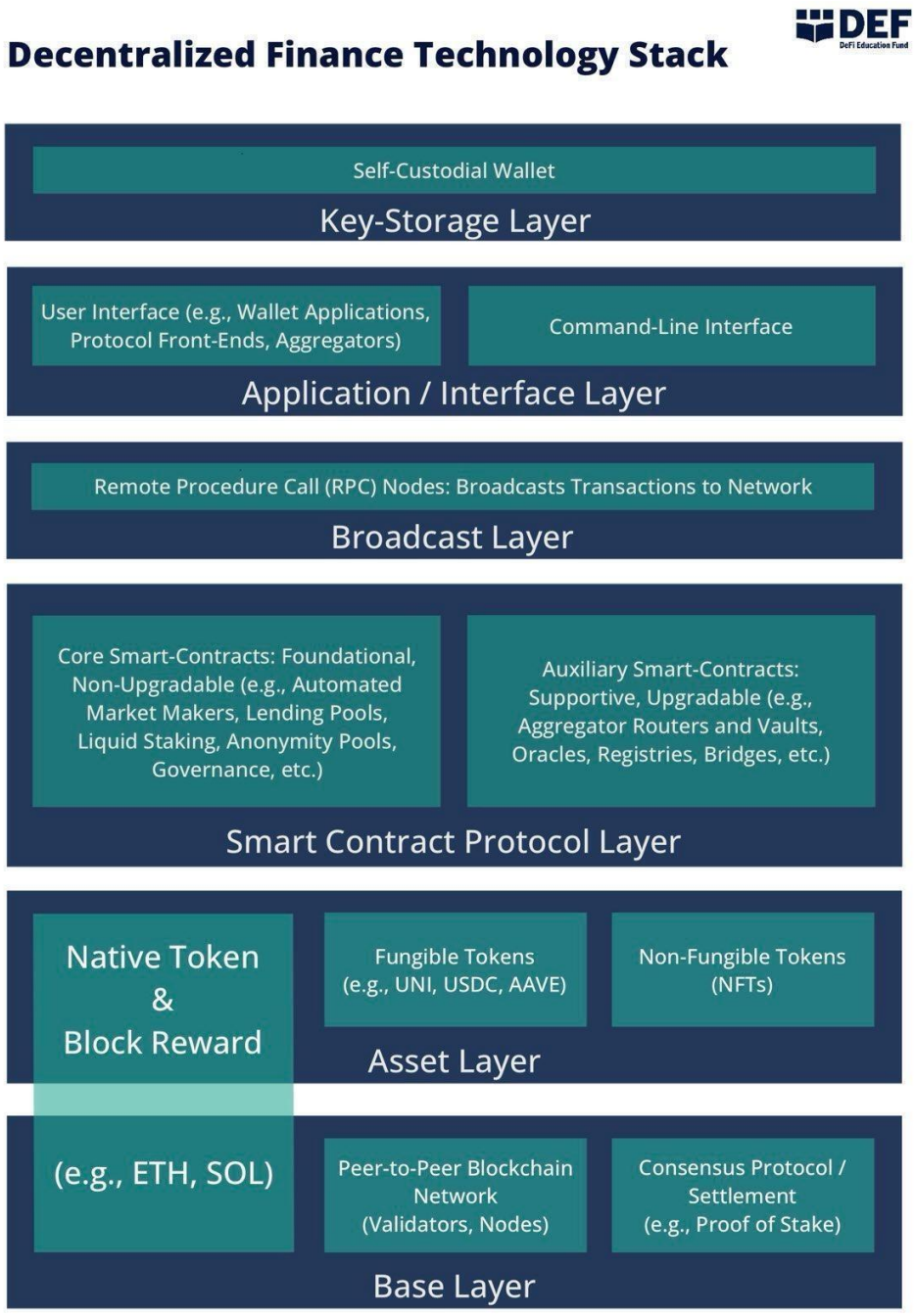

*Network nodes run transactions within the proposed block so they can add the block to their copy of the blockchain if their results match and reach consensus.

This graphic depicts a simplified Ethereum-style smart-contract transaction; it does not describe a universal sequence for Bitcoin, Solana, or every DeFi system. Signing and broadcasting a transaction do not guarantee its inclusion or successful execution. Validation, the sharing of blocks across the network ("block propagation"), and reaching agreement ("consensus") are distinct processes. "Mempool" refers to pending transactions and is not a step shared by every network. Source: DEF, DeFi 101 Readings 15 (July 22, 2025).

## APPENDIX B – The Digital Asset Ecosystem



**APPENDIX C – The DeFi Technology Stack: Separately Supplied Layers**




This graphic illustrates one DeFi architecture, not the digital asset industry as a whole. In a given product, the functional layers may overlap. Whether a smart contract is upgradeable depends on its implementation; "core" does not always mean non-upgradeable. Wallet software provides access to keys and ledger records rather than physically holding assets. Bitcoin and other networks need not implement the smart-contract stack shown here. Source: DEF, DeFi 101 Readings 14 (July 22, 2025); PWG Report at 22 & n.59.