

Navigating Crypto: Industry Map

December 2022

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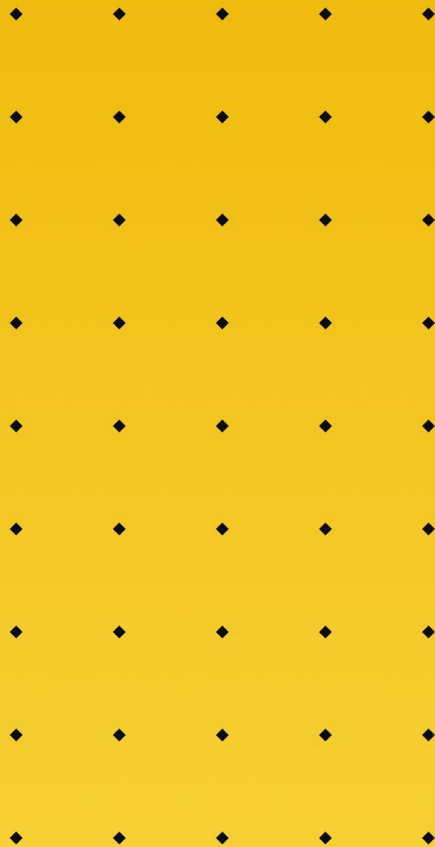
About the Industry Map

The Industry Map provides an overview of the crypto ecosystem. In this report, we break down different verticals into subcategories and lay out a few projects in each of them. Additional details in terms of projects' descriptions and relevant metrics can be found in the following slides.

This map is compiled based on publicly available data, research, and qualitative analysis. It is not intended to be an exhaustive list of projects in the industry. Certain verticals, subcategories, or projects may or may not have been included as we aim to share a variety of key leaders as well as emerging players. Projects showcased are mapped according to their primary use cases. For suggestions, please provide your feedback [here](#).

The mention of specific projects does not constitute endorsement or recommendation by Binance.

Infrastructure



Infrastructure

Vertical Spotlights

We identified 5 key areas of innovation.



Scalability and Fairness

As L1s see increasing adoption, more projects aim to make blockchains more scalable by batching transactions off-chain and more fair by implementing efficient distribution of Maximal Extractable Value.



Data Usability and Tooling

Data generated on blockchain networks are far from being fully usable by developers. Data querying and indexing service is a key innovation area to improve the current developer experience.



Security and Privacy

The rising demand for network security and privacy has resulted in the emergence of projects aiming to prevent malicious data tracking, smart contract hacks, etc.



Computation and Content Delivery

We see more projects focusing on providing users with access to computing services as well as content delivery services based on a decentralized infrastructure.



Connectivity

Layer-1 blockchains are far from being fully connected and interoperable. Numerous cross-chain solutions are being developed to improve the current on-chain user experience.

Infrastructure Vertical Overview

Scalability and Fairness

Zero-Knowledge ("ZK") Rollup Solution



Data Usability and Tooling

Remote Procedure Call ("RPC") Provider



Optimistic Rollup Solution



Maximal Extractable Value ("MEV") Solution



Data Indexing

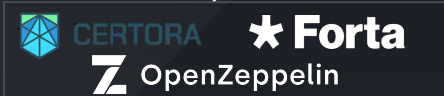


Smart Contract Automation

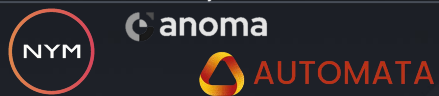


Security and Privacy

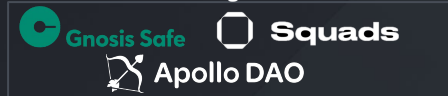
Security Solution



Privacy Solution



Multisig Wallet



Computation and Content Delivery

Cloud Computing



Content Delivery Network ("CDN")



Connectivity

Cross-chain Bridge



Oracle










Infrastructure

Subcategory Description


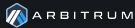

Zero-Knowledge (“ZK”) Rollup Solution:

Protocols that generate cryptographic proofs to prove the validity of transactions before combining them to execute off-chain.

 zkSync	zkSync is a ZK rollup solution addressing Ethereum scalability issues with minimized security compromises.
 Aztec	Aztec Network is the first ZK rollup on Ethereum.
 STARKNET	StarkNet is a permissionless ZK rollup.
 LOOPRING	Loopring is a ZK rollup solution primarily for trading and payment.
 polygon Zero	Polygon has multiple ZK rollup solutions designed to reduce computational costs of generating validity proofs through recursive proofs.
 Scroll	Scroll is an Ethereum L2 solution leveraging ZK rollup.
 Taiko	Taiko is a zkEVM-based general-purpose ZK rollup L2 for Ethereum.

Optimistic Rollup Solution:

Protocols that assume the validity of transactions and then combine them to execute off-chain.






 OP	Optimism is a L2 Optimistic rollup network.
 ARBITRUM	Arbitrum is an Ethereum Optimistic rollup solution.
 boba	Boba Network is a L2 scaling solution and a hybrid compute platform.

Infrastructure

Subcategory Description (cont.)

Maximal Extractable Value (“MEV”) Solution:

Solutions that prevent miners and validators from unfairly profiting by including, excluding, or reordering transactions in a block.





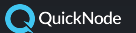



	Flashbots works on mitigating the negative externalities of current MEV techniques and avoiding risks that MEV cause to state-rich blockchains.
	Jito Labs builds high-performance systems to scale Solana and maximize validator rewards.
	Eden is an optional, non-consensus breaking transaction ordering protocol for Ethereum blocks.
	Rook enables users, protocols, and smart contracts to own MEV.
	Manifold is a multi-protocol middleware solution to improve connectivity between DeFi products.

Infrastructure

Subcategory Description (cont.)



Remote Procedure Call (“RPC”) Provider:

RPC is the most direct interface in which developers can communicate with the blockchain system.

 0x	0x is a protocol that enables decentralized exchange of tokens on Ethereum.
 alchemy	Alchemy is a platform enabling developers to interact with the blockchain mainly with API calls.
 INFURA	Infura provides Ethereum API, IPFS API and Gateway, and ETH nodes-as-a-service.
 moralis	Moralis provides a suite of APIs for developers to seamlessly integrate blockchain into their dApps.
 QuickNode	QuickNode is a platform for developers to scale blockchain applications.
 Ankr	Ankr enables developers to build upon a distributed network of nodes.
 POCKET	Pocket Network provides RPC access to Ethereum, Polygon, etc.
 NODEREAL	NodeReal is a one-stop blockchain infrastructure and services provider.

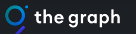


Smart Contract Automation:

Platforms that enable users to automatically execute smart contracts.

 Gelato Network <small>Web3's Automation Protocol</small>	Gelato enables users to automate smart contract functions on Ethereum.
 Keep3r.network	Keep3r enables users to deploy bots to perform operations on-chain.

Data Indexing:

Platforms that provide network data indexing and querying services.



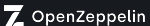
 the graph	The Graph is an indexing protocol for querying networks like Ethereum.
 Coherent	Coherent connects to a wallet address and gets information about that address in a digestible way.
 0xScope	0xScope is a protocol that aims to standardize web2 & web3 data by building a knowledge graph.

Infrastructure

Subcategory Description (cont.)


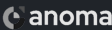

Security Solution:

Protocols that contribute to security of blockchains.

 CERTORA	Certora aims to ensure smart contract and code security.
 Forta	Forta is a real-time detection network for security and operational monitoring of blockchain activities.
 OpenZeppelin	OpenZeppelin provides security products to build and operate dApps.




Privacy Solution:

Projects that contribute to the protection of user privacy.

 Nym	Nym is a decentralized and tokenized infrastructure providing privacy from the network to the application layer.
 anoma	Anoma is an intent-centric, privacy-preserving protocol for decentralized counterparty discovery, solving, and multi-chain atomic settlement.
 AUTOMATA	Automata provides a blockchain-based authentication solution that secures access to accounts and protects users with an active defence.

Multisig Wallet:

Cryptocurrency wallets that require two or more private keys to sign and send a transaction.





 Gnosis Safe	Gnosis Safe is a platform to manage digital assets on Ethereum.
 Apollo DAO	Apollo Safe is a front end for the CW3 multisig contract.
 Squads	Squads is a multisig management protocol for web3-native teams.

Infrastructure

Subcategory Description (cont.)

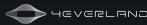


Content Delivery Network (“CDN”):

CDNs are decentralized, distributed networks that provide fast delivery of internet content.

	Meson Network is a bandwidth marketplace using blockchain to replace traditional sales model.
	Media Network is a privacy-first and community-governed CDN.
	Theta Network is a blockchain infrastructure for video and media.
	Livepeer Network is a protocol for developers who want to add live or on-demand video to their project.

Cloud Computing:

Projects that provide users with access to computing services based on a decentralized infrastructure.






	4EVERLAND is a cloud computing platform that integrates storage, computing, and network core capabilities.
	Flux is a scalable decentralized cloud infrastructure.
	Latitude helps developers deploy dedicated servers globally through the bare metal cloud platform.

Infrastructure

Subcategory Description (cont.)

Oracle:

Protocols that connect off-chain with on-chain data.







 Chainlink Labs	Chainlink decentralized oracle networks provide tamper-proof inputs, outputs, and computations to support smart contracts.
 UMA	UMA's Optimistic Oracle allows contracts to request and receive data.
 API3	API3 is a first-party oracle network.
 nest	NEST Protocol is the stochastic computer based on PVM.
 Band Protocol	Band Protocol is a blockchain-agnostic decentralized oracle.

Infrastructure

Subcategory Description (cont.)

Cross-chain Bridge:

Protocols that bridge tokens from one blockchain to another.

Project	Total Value Locked	Description
 Multichain	US\$1B	Fantom, Ethereum, BNB Chain, Polygon, etc.
 Bridgex	US\$309M	Ethereum, BNB, Polygon, Avalanche, etc.
 PORTAL	US\$256M	Ethereum, Terra, Solana, BNB Chain, etc.
 rbit	US\$174M	Ethereum, Ripple, BNB, Polygon, etc.
 Celer cBridge	US\$120M	Ethereum, BNB, Avalanche, Polygon, etc.
 ChainPort	US\$99M	Ethereum, BNB, etc.

Decentralized Finance ("DeFi")



DeFi

Vertical Spotlights

We identified 4 key areas of innovation.



Issuance

We see the emergence of a more diverse suite of financial products in the DeFi space, such as synthetic assets, options, and structured products.



Liquidity

Liquidity staking and collateralized debt position (“CDP”) are becoming more prominent, exposing users to a variety of on-chain liquidity opportunities.



Trading

More diverse financial products are being traded on decentralized exchanges (“DEX”). In particular, the derivatives and perpetuals DEXs are growing rapidly.



Risk Management

There are more projects focusing on providing users with monetary protection and other security measures against hacks, scams, and technical loopholes.

DeFi

Vertical Overview

Issuance

Synthetic Assets



Option Vault



Structured Products



Liquidity

Liquidity Staking



Collateralized Debt Position ("CDP")



Lending



Trading

Spot Decentralized Exchange ("DEX")



Perpetual Decentralized Exchange ("DEX")



Prediction Market



Risk Management

Insurance



Security and Stress Testing



Other

Stream Pay





Launchpad







DeFi

Subcategory Description

Synthetic Assets: Protocols that tokenize the derivative of an underlying asset.

Project	Total Value Locked	Description
SYNTHETIX	US\$273M	Synthetix leverages pooled collateral model that generates fees to SNX collateral providers from trades between Synths.
 ALCHEMIX	US\$64M	Alchemix offers same-asset loan products and accepts deposits in the form of either yield-bearing-assets or underlying collateral assets.
 youves	US\$26M	Youves is a decentralised, non-custodial and self-governed platform for the creation and management of synthetic assets.





Option Vault: Protocols that allow staking assets into vaults for deployment of option strategies.

	US\$57M	Ribbon combines derivatives, lending and a proprietary on-chain options exchange.
 opyn	US\$54M	Oryn allows for partially collateralized options, cash-settled European options, spreads, flash minting options, operators, and other option strategies.
 Lyra	US\$25M	Lyra offers cash-settled, European options and leverages Synthetix protocol assets (sUSD, sETH, sBTC, sLink) for collateral pools.
	US\$23M	Dopex is a maximum liquidity and minimal exposure options protocol.

DeFi

Subcategory Description (cont.)




Structured Products: Yield optimizers, yield tranching, automated LP managers, etc.

Project	Total Value Locked	Description
 convexfinance	US\$3B	Convex is a platform that boosts rewards for CRV stakers and liquidity providers.
 ARRAKIS	US\$471M	Arrakis is a protocol that specializes in concentrated & active liquidity management.
 TRANCHESS	US\$51M	Tranchess offers a yield enhancing asset tracker with varied risk-return solutions.
 ElementFi	US\$7M	Element is an open source protocol for fixed and variable yield markets.

DeFi

Subcategory Description (cont.)




Liquid Staking: Protocols that provide liquidity for staked assets.

Project	Total Value Locked	Description
L I D O	US\$6B	Lido provides daily rewards for staked assets with no lock-ups.
 ROCKETPOOL <small>DECENTRALISED ETHEREUM STAKING PROTOCOL</small>	US\$559M	Rocket is a decentralized staking pool on Ethereum.
STAKEWISE	US\$102M	By depositing ETH into StakeWise, users participate in staking and receive ETH rewards in return.
 stader	US\$99M	Stader offers liquid staking on several blockchains such as BNB Chain, Polygon, and Hedera.
 Marinade	US\$81M	Marinade offers liquid staking on Solana.



DeFi

Subcategory Description (cont.)

Collateralized Debt Position (“CDP”): Protocols that use collaterals to mint stablecoins.

Project	Total Value Locked	Description
 MAKER	US\$6B	MakerDAO enables the generation of stablecoin Dai.
	US\$948M	JustStables enables the generation of USDJ.
	US\$162M	Abracadabra enables the generation of MIM.







Perpetual Decentralized Exchange (“DEX”): DEXs for trading perpetuals.

GMX	US\$796M	GMX uses a multi-asset pool that earns liquidity provider fees from market making, swap fees and leverage trading.
 dYdX	US\$400M	dYdX offers perpetuals as a non-custodial, decentralized margin product with collateral held as USDC and trades settled on Starkware zk-rollup.
 Perpetual Protocol	US\$18M	Perpetual Protocol is an on-chain perpetual futures DEX with deep liquidity and builder-ready composability.

DeFi

Subcategory Description (cont.)







Spot Decentralized Exchange (“DEX”): DEXs for trading assets.

Project	Total Value Locked	Description
 Curve	US\$4B	Curve is an exchange liquidity pool on Ethereum.
 UNISWAP	US\$3B	Uniswap is a cryptocurrency exchange which uses a decentralized network protocol.
 PancakeSwap	US\$3B	PancakeSwap is the leading decentralized exchange on BNB Chain.
 Balancer	US\$2B	Balancer is an automated portfolio manager and trading platform on Ethereum.
 SushiSwap	US\$465M	Sushi is a platform for users to swap, earn, stack yields, lend, borrow, and leverage.
 SUN	US\$409M	SUN is a platform for stablecoin swap, stake-mining and self-governance on TRON.

DeFi

Subcategory Description (cont.)



Lending: Protocols that allow users to lend assets.

Project	Total Value Locked	Description
	US\$4B	Aave allows users to earn interest, borrow assets, and build applications.
	US\$3B	JustLend is a decentralized lending protocol that allows users to supply, borrow, and earn.
 Compound	US\$1B	Compound is an algorithmic, autonomous interest rate protocol built for developers, to unlock open financial applications.
	US\$682M	Venus is a DeFi algorithmic money market protocol on BNB Chain.
	US\$159M	Tectonic is a cross-chain money market for earning passive yield and accessing instant backed loans.
	US\$154M	Euler is a non-custodial DeFi protocol on Ethereum that allows users to lend and borrow assets.



DeFi

Subcategory Description (cont.)

Prediction Market: Protocols that enable users to wager, bet, and buy in future outcomes.

Project	Total Value Locked	Description
 Polymarket	US\$6M	Polymarket allows users to build portfolios based on their forecasts.
 azuro	US\$5M	Azuro offers decentralized betting.



Stream Pay: Payment modules that allow continuous settlement via token streaming.

 Sablier	US\$5M	Sablier is a token streaming protocol powered by Ethereum smart contracts.
 Superfluid	US\$1M	Superfluid handles composable stream of value with continuous settlement.




DeFi

Subcategory Description (cont.)

Insurance: Protocols that aim to provide users with monetary protection.

Project	Total Value Locked	Description
 Nexus Mutual	US\$167M	Nexus Mutual allows users to share insurance risk together.
 UNSLASHED	US\$21M	Unslashed provides insurance for decentralized finance projects.





Launchpad: Composable modules for token issuance, liquidity, etc.

 PinkSale	US\$164M	PinkSale allows users to launch tokens and create their initial token sale.
 team <small>by TrustSwap</small>	US\$88M	Team Finance is a toolkit that helps users create and grow their tokens.
 DxSale	US\$85M	DxSale is an Initial DEX Offering (“IDO”) launchpad.

DeFi

Subcategory Description (cont.)

Security and Stress Testing: Modules that stress test or offer other security measures to protocols.

Project	Description
 CERTIK	Certik is a security-focused audit and ranking platform.
 Chainalysis	Chainalysis provides blockchain analysis for government agencies, projects, and financial institutions.
 ZOKYO.	Zokyo builds, secures, and funds crypto and DeFi projects.
 GAUNTLET	Gauntlet is a financial modeling platform that uses battle-tested techniques to inform protocol management.

Non-Fungible Token ("NFT")



NFT

Vertical Spotlights

We identified 3 key areas of innovation.



Marketplace

We see the emergence of NFT marketplaces targeting a variety of use cases, such as chain-specific listing, aggregators, and thematic curations. Users gain access to a wider range of buyer experiences.



Financialization

There are more diverse NFT-based financial products and services, such as staking, lending, derivatives, fractionalization, etc. Users are exposed to liquidity opportunities for their previously illiquid NFT assets.



Service

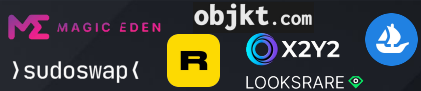
An increasing number of projects are helping users improve their experiences of purchasing NFTs and managing portfolios. Other projects provide services to help creators launch, secure, and store their NFTs more seamlessly.

NFT

Vertical Overview

Marketplace

Open Marketplace



Curated Marketplace



Aggregator



Financialization

Lending



Fractionalization



Buy-Now-Pay-Later



Derivatives

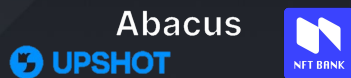


Options



Service

Portfolio Analytics and Appraisal



Rental



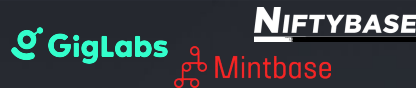
Membership and Content Gating



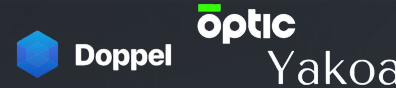
Storage



Launchpad








Safety



NFT

Subcategory Description



Open Marketplace: Platforms that allow for any NFT from any brand to be sold.

Project	Monthly Users	Monthly Volume	Royalty Fees	Description
	201K	US\$172M	Compulsory	OpenSea is the largest NFT marketplace.
	184K	US\$77M	Optional for creators who don't adopt the Open Creator Protocol (OCP)	Magic Eden is the largest NFT marketplace on Solana.
	14K	US\$59M	Compulsory	X2Y2 is an NFT marketplace on Ethereum with 100% revenue shared with token stakers.
LOOKSRARE 	6K	US\$55M	Optional	LooksRare Is a NFT marketplace with rewards for participating.
)sudoswap(2K	US\$3M	Optional	Sudoswap is a decentralized, on-chain NFT exchange based on an AMM model.
objkt.com	17K	US\$2M	Compulsory	Objkt is the largest NFT marketplace on Tezos.
	34K	US\$437K	Compulsory	Rarible is a low-fee NFT marketplace.



NFT

Subcategory Description (cont.)

Aggregator: Platforms that allow users to easily trade NFT collections from different marketplaces.

Project	Monthly Users	Monthly Volume	Description
 element	27K	US\$3M	Element allows users to optimize for liquidity.
 gem	3K	US\$3M	Gem is a low-fee NFT aggregator.
Genie	N/A	US\$286K	Genie is an NFT marketplace aggregator.




Curated Marketplace: Selective platforms that focus on a certain type of NFTs, aesthetic, or set of values.

 Foundation	9K	US\$4M	Foundation is a curated, decentralized NFT marketplace.
 exchange art	3K	US\$259K	Exchange Art is a Solana NFT Marketplace.
Raresama	N/A	N/A	Raresama allows users to create or browse NFT art collections and enjoy a diverse mix of artists.

NFT

Subcategory Description (cont.)

Lending: Protocols that allow users to collateralize NFTs for loans.




Project	Total Value Locked	Description
 BendDAO WEB3 DATA LIQUIDITY	US\$81M	BendDAO is the first decentralized peer-to-pool based NFT liquidity protocol.
	US\$17M	JPEG'd allows users to open CDPs using NFTs as collateral.
FRAKT	US\$2M	FRAKT allows users to buy, sell, earn yield and get instant liquidity out of NFTs.
	N/A	NFTfi is an NFT liquidity protocol.

NFT

Subcategory Description (cont.)




Fractionalization:

Protocols that allow users to collectively own NFTs.

 fractional	Fractional enables collective ownership and governance of NFTs.
 NIFTEX	NIFTEX allows users to fractionalize NFTs.
 unic.ly	Unic.ly allows users to combine, fractionalize, and trade NFTs.




Options:

Protocols that allow staking NFTs into vaults for option strategies.

 hook	Hook is an NFT-native options protocol.
 NiftyOptions	NiftyOptions contracts allow users to create NFT options.
 PUTTY.FINANCE	Putty is a decentralized NFT options marketplace.

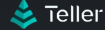


Derivatives:

Protocols that allow users to trade NFT derivatives.

 MIMICRY	Mimicry is a derivatives protocol to long and short NFTs.
 nftperp	Nftperp is a perpetual futures DEX for NFTs.
 SOLV PROTOCOL	Solv is a one-stop platform for creating and trading financial NFTs.

Buy-Now-Pay-Later (“BNPL”):

Protocols that allow users to buy NFTs and pay for them later.



 Teller	Teller supports NFT buyers to finance their next purchase.
 CEDAR	Cedar offers buy-now-pay-later for NFT purchases.
 CYAN	Cyan offers buy-now-pay-later for NFT purchases.

NFT

Subcategory Description (cont.)




Portfolio Analytics and Appraisal:

Tools that analyze or appraise NFTs.

Abacus	Abacus is a decentralised appraisal tool for NFTs.
	NFT Bank is a NFT portfolio management service.
 UPSHOT	Upshot builds a scalable NFT pricing infrastructure.



Membership and Content Gating:

Tools that gate access to membership or content using NFTs.

 AUDIUS	Audius is a music streaming and sharing platform that puts power back into the hands of content creators.
 HIGHLIGHT	Highlight enables users to easily NFT-gate music, podcasts, videos, etc.
 RareCircles	RareCircles enable businesses to introduce NFTs to engage high-value users.



Rental:

Protocols that allow users to rent NFTs.

DOUBLE	Double Protocol is an NFT rental protocol.
	reNFT is a multi-chain NFT rental protocol that enables uncollateralized renting, lending, and reward share.
 Renfter	Renfter is an uncollateralized NFT rental protocol.

Storage:

Solutions for storing NFT data.



	Nft.storage is a long-term storage service designed for off-chain NFT data.
 Pinata	Pinata is an IPFS solution for creators and developers.

NFT

Subcategory Description (cont.)



Launchpad:

Modules for projects to launch their own NFTs.

 GigLabs	GigLabs enables brands to launch NFT projects.
 Mintbase	Mintbase enables users to build their own minters, markets, and NFT redeeming systems.
NIFTYBASE	Niftybase is a NFT collection launchpad.

Safety:

Modules that offer security measures to protocols.

 Doppel	Doppel is an IP protection platform for NFTs.
 Optic	Optic monitors blockchains to reveal the origins of NFTs and how they have been reimagined, remixed, or copied.
Yakoa	Yakoa is an NFT fraud detection network.

Gaming Financialization ("GameFi")

GameFi

Vertical Spotlights

We identified 3 key areas of innovation.



Games

The question remains - what is the best way to most seamlessly implement crypto-based in-game economies without impacting gamer incentives in an unsustainable way.



Game Development

We see the emergence of projects in the form of game studios, Initial Game Offering (“IGO”) launchpads, and developer kits that aim to help creators more smoothly develop and launch their games with crypto-based in-game economies.



Player Experience

There are more diverse products and services that aim to improve player experience by lowering the barriers to explore and onboard into crypto-based games.

GameFi

Vertical Overview

Games

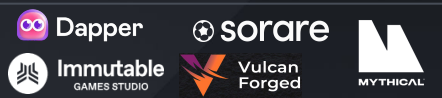
Metaverse



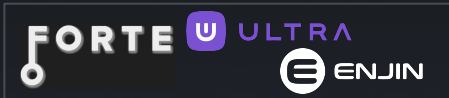
Play-to-Earn



Game Studio



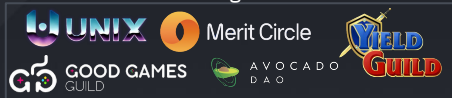
Toolkit



Launchpad



Gaming Guild



Game NFT Marketplace



Game Development




Player Experience

GameFi

Subcategory Description

Metaverse:

Virtual worlds where users can engage in a variety of gaming experiences.










Project	Market Cap	Description
 SANDBOX	US\$667M	The Sandbox is a virtual world where players can build, own, and monetize their gaming experiences on the Ethereum blockchain.
 Decentraland	US\$570M	Decentraland is a 3D virtual world where lands can be bought as NFTs.
 StarryNift	N/A	StarryNift is an immersive VR-supported metaverse.

GameFi

Subcategory Description (cont.)

Play-to-Earn:

Games where users can monetize their gaming experiences in the form of cryptocurrencies.

Project	Market Cap	Description
	US\$681M	Players of Axie Infinity collect and mint NFTs which represent digital pets and engage in the crypto-based in-game economy.
	US\$175M	StepN is a Web3 lifestyle app that rewards users with NFTs for walking, jogging, and running outdoor.
	US\$132M	Players can earn GALA and limited-edition NFTs through playing games on Gala platform.
	US\$69M	Hooked Protocol aims to provide streamlined and fun gamified learning mechanism and experience for new users.
	US\$47M	Aavegotchi is an open-source, community-owned NFT gaming protocol.
	US\$42M	Players can earn Trilium that gives them power in the Planet DAOs.
	US\$33M	My Neighbor Alice is a multiplayer builder game, where players can buy virtual islands, collect and build items and meet new friends.
	US\$30M	UFO Gaming is a decentralized gaming platform bridging traditional games onto the blockchain.
	US\$24M	Splinterlands is an NFT card game enabling players to play, trade, and earn.

GameFi

Subcategory Description (cont.)



Game Studio:

Studios that specialize in developing crypto-based games.

 Dapper	NBA Top Shot, NFL All Day, UFC Strike, CryptoKitties, etc.
 Immutable GAMES STUDIO	Gods Unchained (Strategy Cards), Guild of Guardians (Action RPG).
 Vulcan Forged	Vulcan Verse (MMO RPG), Tartarus (Action Survival), etc.
 MYTHICAL	NFL Rivals, Blankos Block Party, Nitron Nation, etc.
 sorare	Football, NBA, MLB.




Launchpad:

Platforms that provide services to creators to launch games with crypto-based in-game economies.

 COCOS BCX	Cocos-BCX aims to bridge more creators into crypto via GameFi incubation, investment, distribution, IGO, etc.
 Seedify	Seedify is a launchpad and incubator for crypto games.
ROCO	Roco provides services to crypto game developers, content creators and player communities.

Toolkit:

Tools for incorporating crypto-based economies into games.





 FORTE	Forte is a game platform that enables game companies to create blockchain games and scale in-game economies.
 ENJIN	Enjin offers a suite of products that make NFTs easy for individuals, businesses, and developers.
 ULTRA	Ultra is a platform that brings games, digital assets, tournaments, and live streams to one place through a single login.

GameFi

Subcategory Description (cont.)






Game NFT Marketplace:

Platforms for gamers to trade in-game items in the form of NFTs.

 AIRNFTS	AirNFTs is a game NFT marketplace on BNB Chain, Fantom, and Polygon.
 dMARKET	dMarket enables secure buying, selling, and trading of in-game NFTs.
 OCTOGAMEX	OctoGamex is a gaming NFT trading platform.
 FRACTAL	Fractal is an open marketplace for gaming NFTs.

Gaming Guild:

Gamer communities that collectively monetize the play-to-earn model and lower its entry barrier.

 YGG GUILD	YGG is a play-to-earn gaming guild.
 Merit Circle	Merit Circle is a guild that rewards players for their performance.
 AVOCADO DAO	Avocado uses play-to-earn model to reward its players.
 UNIX GUILD	UniX Gaming is a play-to-earn gaming guild.
 GOOD GAMES GUILD	Good Games Guild is a play-to-earn gaming guild.

Decentralized Social



Decentralized Social Vertical Spotlights

We identified 3 key areas of innovation.



Identity and Reputation

We see the emergence of blockchain-based identity and reputation networks targeting a variety of use cases, such as profession, skill certificate, membership, event attendance, etc.



Social Media

The space is still in its nascent stage. We see a number of projects aiming to incorporate verifiability, composability, transparency, and shared ownership into social media platforms with use of the Web3 tech stack.



Messaging

Blockchain introduces a new implementation of verifiable identity, which might potentially transform how conversations are carried out online, especially with regards to purchases, trading activities, and transactions.

Decentralized Social

Vertical Overview

Identity and Reputation

Identity Infrastructure



Transferable Token



Non-transferable Token



Social Media

Social Network Infrastructure



Social Media dApp



Messaging

Messaging Infrastructure



Messaging dApp





Decentralized Social

Subcategory Description




Non-transferable Token:

A type of blockchain asset that is permanently tied to its owner, often used to prove one's identity and reputation.

 GALXE	Galxe is a Web3 credential data network that helps projects automatically issue on-chain credentials in the form of NFTs to incentivize and reward certain user behaviors.
RabbitHole	RabbitHole helps users build on-chain resumes by issuing credentials for completing tasks and learning skills.
 DEQUEST	DeQuest is a multi-chain GameFi platform that verifies the achievements, activities, and behaviours of players.



Transferable Token:

A type of blockchain asset that can be transferred, often used to prove one's membership in a group or community.

 rally	Rally is a platform for creators and their communities to build their own independent digital economies.
 Roll	Roll creators mint social tokens on Ethereum as ERC20 tokens which can be easily traded on exchanges and used in applications across the web.
 POAP	POAPs are minted typically as a gift from an issuer to collectors in celebration of a special event.

Identity Infrastructure:

Developer infrastructure for building decentralized identities.



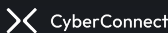
 Spruce	Spruce ID is an open-source stack for developers to build decentralized identity and verifiable credentials into their dApps.
 FRACTAL	Fractal helps developers build identities and privacy in a decentralized way.

Decentralized Social

Subcategory Description (cont.)




Social Network Infrastructure:

Developer infrastructure for building decentralized social networks and graphs.

 LENS	Lens Protocol is a composable and decentralized social graph.
 DeSo	DeSo is a new layer-1 blockchain built to decentralize social media, and scale storage-heavy applications.
 CyberConnect	CyberConnect is a decentralized social graph protocol that helps dApps bootstrap network effects and build personalized social experiences.




Messaging Infrastructure:

Developer infrastructure for building decentralized messaging.

 XMTP	XMTP Labs aim to build a secure, open, and decentralized communication protocol that connects creators, communities, applications, and users.
 Dialect	Dialect enables interactive mobile messaging and notifications.
	Convospace is a decentralized conversation protocol through which users can comment and chat with each other across different dApps.

Social Media dApp:

User interface for decentralized social networks and graphs in the form of dApp.





 farcaster	Farcaster is a sufficiently decentralized social network with a user-friendly mobile app interface.
 Context	Context is a social media dApp.
 Lenster	Lenster is a composable, decentralized, and permissionless social media web app built with Lens Protocol.

Decentralized Social

Subcategory Description (cont.)

Messaging dApp:

User interface for decentralized messaging in the form of dApp.

 Blockscan	Blockscan Chat is a messaging platform for users to message each other wallet-to-wallet, powered by Log-in With Ethereum.
 nansen	The vision of Nansen Connect is to become the go-to platform for the crypto community to discuss alphas and trading opportunities while avoiding spamming and noises on Discord channels.
 WalletConnect	WalletConnect Chat is a direct messaging protocol that can enable wallets to message each other.
 gm	Gm allows users to create a community with chat, forums, and token gating.

Decentralized Autonomous Organization ("DAO") Tooling



DAO Tooling

Vertical Spotlights

We identified 2 key areas of innovation.



Governance Structure

We see the emergence of tools for DAO community managers to improve their organizational structure by more effectively managing membership-based access and developing frameworks to set up DAOs for specific purposes.



Operations Management

We see a number of projects aiming to incorporate functionalities such as treasury, contribution, and compensation management into DAOs with use of the Web3 tech stack.

DAO Tooling

Vertical Overview

Governance Structure

Access Control

Guild.xyz
Guild.xyz
Guild.xyz



Lit Protocol



Framework

SYNDICATE
COLONY

buildspace

COINWISE



Operations Management

Treasury Management

multis



Coordinape

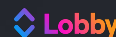
Contribution

L3



Workspace Management

anytype



Clarity

Voting and Arbitration



Aragon Court

snapshot

sybil

Analytics






DAO Tooling

Subcategory Description






Access Control:

Tool for managing access to internal platforms based on DAO membership.

	Guild enables platform-agnostic communities by offering automated membership management.
	Collab.Land services DAOs, NFT communities, brands, and creators of projects by enabling easy token gating.
Lit Protocol	Lit provides decentralized cryptography for access control, compute, and encryption.
	Metaforo enables Web3-native forums with governance, incentives, and on-chain profiles.

Framework:

A combination of tokens and tools for setting up DAO structures for general use cases or specific purposes.




 SYNDICATE	Syndicate apps and infrastructure allow users to build their community and invest collectively.
 COINWISE	Coinwise offers a suite of no-code tools for airdrops and NFT memberships.
buildspace	Buildspace enables developers to easily build their DAOs with the use of Javascript language.
 ARAGON	Aragon enables users to build DAOs on open-source infrastructure with governance plugins.
 COLONY	Colony is a DAO toolkit that incorporates functionalities such as tokens, reputation, governance, token sales, etc.
 XDAO	XDAO is a multichain DAO builder for jointly managing crypto assets and DeFi projects.

DAO Tooling (cont.)

Subcategory Description




Treasury Management:

Tool for setting up a DAO's financial infrastructure.

	Multis helps Web3 companies secure, manage, and spend cryptocurrencies and USD.
	Magna enables companies to airdrop, stream, and distribute tokens to team, investors, and community on custom unlock schedules.
 Coordinape	Coordinape allows DAO members to reward each other and makes community payments more transparent.




Contribution:

Tool for acquiring and managing contributions from the community.

	Gitcoin is a platform where contributors get paid to work on open source software in Python, Rust, Ruby, JavaScript, Solidity, HTML, CSS, Design.
	Layer3 helps projects reach, acquire, and retain users and contributors with interactive experiences.
	Dework provides Web3-native project management with token payments, credentialing, and bounties.

Workspace Management:

Tool for managing a DAO's workspaces and documentations.


 anytype	Anytype is a software that aims to break down barriers between applications, give back privacy and data ownership to users.
 Lobby	Lobby offers token-gated documentation for Web3 communities.
	Clarity allows users to share task boards and docs, manage access with tokens, receive bounty payouts, and build contributor reputations.

DAO Tooling (cont.)

Subcategory Description


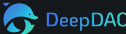
Voting and Arbitration:

Tool for coordinating transparent voting and arbitration in DAOs.

	Kleros is a decentralized arbitration service for disputes arising in the Web3 economy.
Aragon Court	Aragon Court helps users handle subjective disputes that require the judgment of human guardians.
sybil	Sybil is a governance tool for discovering delegates, built by Uniswap.
snapshot	Snapshot is a platform where projects can create proposals for people to vote on using cryptocurrency.

Analytics:

Tool for analyzing data generated by and relevant to a DAO.

	Tally is a dashboard aggregating on-chain data from protocols' governance for research and analysis.
	DeepDAO enables discovery, listing, and analytics for DAOs.

About Binance Research

Binance Research is the research arm of Binance, the world's leading cryptocurrency exchange. The team is committed to delivering objective, independent, and comprehensive analysis and aims to be the thought leader in the crypto space. Our analysts publish insightful thought pieces regularly on topics related but not limited to, the crypto ecosystem, blockchain technologies, and the latest market themes.



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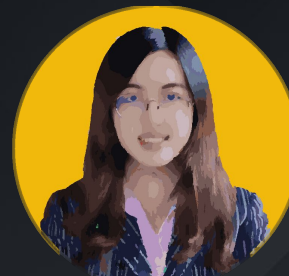
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