



Navigating Crypto: Industry Map

June 2025



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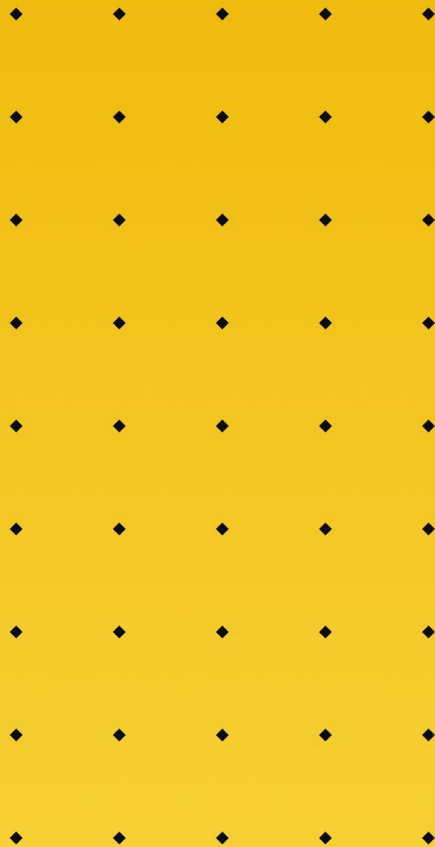
About the Industry Map

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 project 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. The projects showcased are mapped according to their primary use cases.

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

I. Infrastructure



Infrastructure

Vertical Spotlights

We identified 5 key areas of innovation.



Scalability and Fairness

As Layer-1 ("L1") chains see increasing adoption, many projects aim to make blockchains more scalable by batching transactions off-chain and more fair by implementing efficient distribution of Maximal Extractable Value ("MEV").



Data Usability and Tooling

Data generated on blockchain networks is far from being fully usable by developers. Data querying and indexing services are key innovation areas 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.



Cloud Networks

We see more projects focusing on providing users with access to web-based services that may entail storage, computing, and content delivery through decentralized infrastructure.



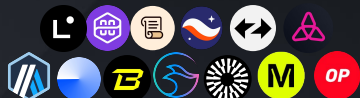
Connectivity

There are ongoing efforts to enhance L1 blockchains' connectivity and interoperability.

Infrastructure Vertical Overview

Scalability and Fairness

Layer 2



Remote Procedure Call ("RPC") Provider



Data Usability and Tooling

Rollup-as-a-Service



Data Indexing



Maximal Extractable Value ("MEV") Solution



Smart Contract Automation



Security and Privacy

Security Solution



Privacy Solution



Multisig Wallet



Cloud Networks

Cloud Computing



Content Delivery Network ("CDN")

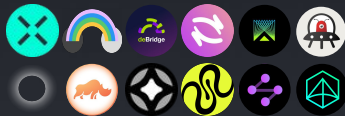


File Storage

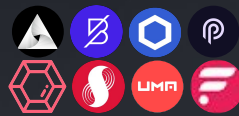


Connectivity

Cross-Chain Bridge



Oracle



Wireless Networks









Infrastructure

Subcategory Description








Layer 2 (Zero Knowledge):

Protocols that execute bundled transactions off-chain and verify it on-chain using zero-knowledge proofs.

	Linea is a zkEVM rollup solution developed by Consensys.
	Polygon zkEVM is an Ethereum L2 scaling solution that uses ZK proofs to offer validity and quick transaction finality.
	Scroll is a general-purpose zkEVM rollup solution.
	StarkNet is a decentralised, permissionless ZK rollup developed by Starkware.
	zkSync Era is a ZK rollup solution addressing Ethereum scalability issues with minimized security compromises.
	Taiko is a highly configurable, permissionless network that combines based sequencing and a multi-proof ZK system.

Layer 2 (Optimistic):

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







	Arbitrum is the largest optimistic rollup network on Ethereum by TVL.
	Base is an L2 network launched by Coinbase and built on the OP Stack.
	Blast is an L2 network with a feature of native ETH and stablecoin yield.
	Manta Pacific operates as an Optimistic L2 on Ethereum that integrates Manta Network's Universal Circuits, with plans to transition into a zkEVM.
	Mantle is an optimistic L2 solution built on Ethereum.
	Mode is an L2 built on the OP stack that rewards users for growing the network via new economic mechanisms.
	OP Mainnet is a fast, stable, and scalable L2 solution built by Ethereum developers, for Ethereum developers.

Infrastructure

Subcategory Description (cont.)

Rollup-as-a-Service:

Platforms that help teams deploy custom rollups using pre configured infrastructure, including execution, data availability, bridges, and sequencer setups..







	Alchemy Rollups is a complete and comprehensive developer platform for rollup deployment.
	Caldera makes it easy to launch performant, customizable Arbitrum Orbit and OP Stack rollups.
	Conduit allows users to launch their own production-ready OP stack rollup in minutes on the only self-serve RaaS platform.
	AltLayer is a decentralized and elastic Rollup-as-a-Service protocol for developers to launch appchains.
	Saga is a Web3 scalability protocol for the automated deployment of dedicated blockspace.
	Zeeve is an enterprise grade zero knowledge and optimistic rollup infrastructure platform.

Infrastructure

Subcategory Description (cont.)

Maximal Extractable Value (“MEV”) Solution:

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



	Eden Network is an optional, non-consensus-breaking, transaction ordering protocol for Ethereum blocks.
	Flashbots works on mitigating the negative externalities of current MEV techniques and avoiding the risks that MEV causes to state-rich blockchains.
	Jito Labs builds high-performance systems to scale Solana and maximize validator rewards.
	Manifold is a block builder for users and validators on the Ethereum blockchain, aiding in the creation of MEV for all stakeholders.
	Shutter aims to prevent front-running and malicious MEV by using threshold encryption.
	Matcha is a DEX built by Ox that lets you trade without gas and protects you against MEV.

Infrastructure

Subcategory Description (cont.)



Remote Procedure Call (“RPC”) Provider:

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

	Alchemy is a platform that enables developers to interact with the blockchain through API calls.
	Ankr connects developers, dApps, wallets, exchanges, and all other use cases to blockchains via their RPCs and APIs.
	Blockdaemon provides instant access to robust, customizable data sets with protocol specific endpoints.
	GetBlock is a Blockchain-as-a-Service (BaaS) platform that provides a fast and easy API connection to full nodes from leading blockchain platforms.
	Infura offers a development suite which provides instant, scalable API access to the Ethereum and IPFS networks.
	Pocket Network provides a decentralised RPC infrastructure with high uptime, cost-effective access, and low latency.
	QuickNode is a platform for developers to scale blockchain applications.





Smart Contract Automation:

Platforms that enable users to automatically execute smart contracts.

	Gelato Network enables users to automate smart contract functions on Ethereum.
	OpenZeppelin Relay sends transactions via HTTP API, automating smart contract operations securely.

Data Indexing:

Platforms that provide network data indexing and querying services.








	OxScope is a protocol that aims to standardize Web2 and Web3 data by building a knowledge graph.
	Covalent is a unified API that brings data from different chains and other searchable endpoints.
	SubQuery offers data indexing on Polkadot, Cosmos, Avalanche, Algorand, NEAR, Ethereum, and more.
	The Graph is an indexing protocol for querying networks like Ethereum.

Infrastructure

Subcategory Description (cont.)




Security Solution:

Protocols that contribute to the security of blockchains.

	Forta is a real-time detection network for security and operational monitoring of blockchain activities.
	Harpie is the first on-chain firewall that protects users from scams, hacks, and theft.
	ImmuneFi is a leading bug bounty platform.
	OpenZeppelin provides security products to build and operate dApps.
	Revoke.Cash is a security management platform managing token approvals, protecting users against scams across 60+ networks.
	SharkTeam is a leading Web3 security service provider that offers smart contract audits, chain analytics, and emergency response services.
	QuantStamp provides security for hire, protecting over \$200B in digital asset risk from hackers.





Multisig Wallet:

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

	Safe is a platform to manage digital assets on Ethereum via smart accounts.
	MSafe developed the first multisig, non-custodial asset management solution for the Move ecosystem.
	Squads is a multisig management protocol for Web3-native teams.

Privacy Solution:

Projects that contribute to the protection of user privacy.







	Anoma is an intent-centric, privacy-preserving protocol for decentralized counterparty discovery, solving, and multi-chain atomic settlement.
	Automata provides a blockchain-based authentication solution that secures access to accounts and protects users with an active defense.
	Hopr is a data-centric privacy tool that prevents bots from accessing the metadata of wallets when users run transactions against a blockchain.
	Nym is a decentralized and tokenized infrastructure that provides privacy from the network to the application layer.

Infrastructure

Subcategory Description (cont.)

Content Delivery Network (“CDN”):

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






	Fleek is an open-source edge computing platform providing dynamic or static content acceleration.
	Livepeer Network is a protocol for developers who want to add live or on-demand video to their project.
	Media Network is a privacy-first and community-governed CDN.
	Meson Network is a bandwidth marketplace using blockchain to replace traditional sales models.
	Theta Network is a blockchain infrastructure for video and media.
	Script Network is an EVM Layer 1 video protocol, infrastructure and live broadcasting network.



Infrastructure

Subcategory Description (cont.)

Computing:

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

	Akash Network is a decentralized cloud computing network that allows users to delegate spare GPU resources for purposes such as artificial intelligence.
	Aethir provides distributed cloud compute infrastructure by aggregating enterprise-grade GPU chips for end users to access.
	AIOZ is a decentralized network for AI computation, data storage, and seamless media and video streaming.
	Flux provides a fully decentralized computational network providing simple compute power for databases or censorship resistant content delivery.
	Golem Network is decentralized peer-to-peer marketplace for distributed computing resources.







	io.net offers a decentralized network that provides cost-efficient access to distributed cloud clusters optimized for machine learning and AI projects.
	Render Network is a decentralized cloud computing platform that allows anyone to share spare GPU resources and is typically used in rendering graphics.

Infrastructure

Subcategory Description (cont.)

Storage:

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









	Arweave offers permanent and decentralized storage in an open ledger.
	BNB Greenfield is a decentralized storage infrastructure that simplifies the process of storing and managing data access.
	Filecoin is an decentralized, peer-to-peer cloud storage network for monetizing, storing, and retrieving data.
	Sia is a decentralized cloud storage platform that enables trustless interactions between renters and hosts.
	Storj is a decentralized cloud storage solution prioritizing security and privacy.
	Zus is a 3-layer security multi-cloud storage with no vendor lock-in and free egress.





Infrastructure

Subcategory Description (cont.)

Cross-Chain Bridge:

Protocols that bridge tokens from one blockchain to another.

	Across Protocol: Ethereum, Polygon, Base, zkSync, and 4 other chains.
	Celer cBridge: Ethereum, BNB Chain, Arbitrum, Aptos, Sui, and 40 other chains.
	Debridge: Ethereum, BNB Chain, Polygon, Solana, and 8 other chains.
	Hop Exchange: Ethereum, Arbitrum, Base, and 6 other chains.
	Multibit: Bitcoin, Ethereum, BounceBit, Solana, Polygon, and 4 other chains.
	Orbiter Finance: Ethereum, Base, Arbitrum, 35 other chains.
	Portal Bridge: Ethereum, BNB Chain, and 23 other chains.
	Rhino.fi: Ethereum, BNB Chain, opBNB, 18 other chains.









	Stargate: Ethereum, BNB Chain, Arbitrum, and 23 other chains.
	Squid Router: Ethereum, BNB Chain, 68 other chains for V1, Ethereum, BNB Chain, 15 other chains for V2 (Beta).
	Synapse: Ethereum, BNB Chain, Arbitrum, and 18 other chains.
	zkbridge: Ethereum, BNB Chain, opBNB, Scroll, and 6 other chains.

Infrastructure

Subcategory Description







Oracle:

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

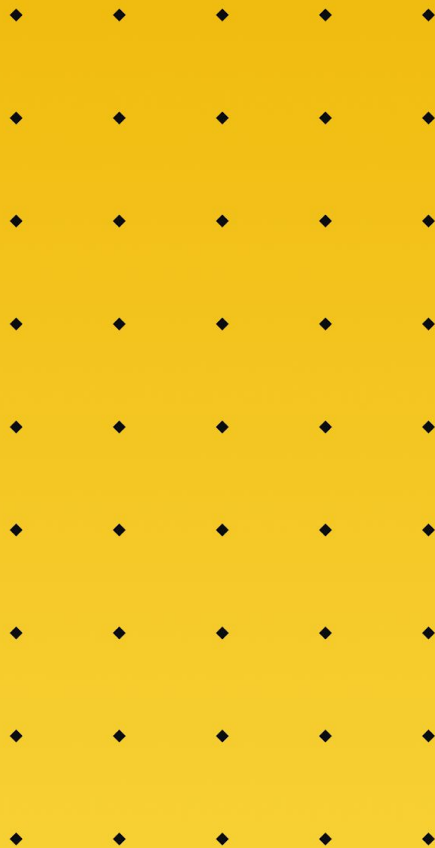
	API3 is a first-party oracle network.
	Band Protocol is a cross-chain data oracle platform that aggregates and connects real-world data to smart contracts.
	Chainlink decentralized oracle networks provide tamper-proof inputs, outputs, and computations to support smart contracts.
	Pyth delivers real-time, high-fidelity, high-frequency market data for DeFi applications.
	RedStone Oracle is a modular oracle delivering cost effective data for DeFi.
	Supra Oracles is a cross-chain oracle network that runs on Distributed Oracle Agreement.
	UMA's Optimistic Oracle allows contracts to request and receive data.
	Flare's Time Series Oracle provides fast, decentralized and highly accurate time series data.

Decentralized Wireless Networks:

Protocols that leverage blockchain technology to offer seamless internet connection.

	Helium Mobile is a decentralized wireless infrastructure project enabling to deploy and operate mobile networks and 5G.
	Karrier One is global carrier-grade mobile network running on decentralized telecommunications infrastructure that operates on Sui.
	Roam by Metablox is a decentralized WiFi roaming network that enables global connectivity via its routers.
	Wicrypt is a decentralized hotspot sharing and token mining network.
	XNET is a decentralized, neutral host mobile network that leverages Wi-Fi Passpoint and 3GPP cellular technologies.
	World Mobile Network is a decentralised and secure blockchain platform that enables a new generation of wireless networks.

II. 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, restaking and collateralized debt positions (“CDPs”) 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 (“DEXs”).



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



Options/Structured Products



Yield



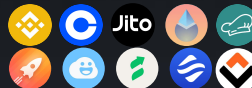
Launchpad



Lending



Liquid Staking



Collateralized Debt Position ("CDP")



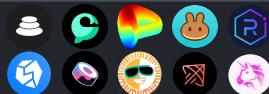
Restaking



Liquid Restaking



Decentralized Exchange ("DEX")



Prediction Market



Derivatives



Security Analytics



Insurance









Risk Management

DeFi

Subcategory Description






Synthetics: Protocols that incorporate cryptocurrencies and traditional derivative assets, essentially tokenized derivatives.

	Alchemix is a DeFi protocol that allows the creation of synthetic tokens that represent the future yield of a deposit.
	Metronome allows users to post multi-collateral assets from their portfolio and create a multitude of synthetic assets.
	Synthetix is the largest derivatives liquidity protocol, allowing users to trade a wide array of derivatives in DeFi.
	Youves is a decentralized DeFi platform that facilitates the creation and management of synthetic assets.
	Kwenta is a non-custodial exchange for perpetual contracts built on Optimism.
	Ethena is a synthetic dollar protocol built on Ethereum, USDe is backed with crypto assets and corresponding short futures positions.

DeFi

Subcategory Description (cont.)







Options/Structured Products: Yield optimizers, yield tranching, automated LP managers, options trading, etc.

	Deri Protocol is a derivatives protocol providing futures, options, powers, and gamma trading products.
	Katana is a yield generation protocol on Solana designed to generate sustainable yield from automated option strategies.
	Derive is a spot, perpetuals and options trading platform designed to be secure, performant and easy to use.
	Thetanuts Finance offers on-chain options and automated strategies for users to earn and optimize their yields.
	Typus Finance is a yield infrastructure that offers options and options vault on Sui Network.

DeFi

Subcategory Description (cont.)






Yield: Projects providing yield strategies such as tokenized yield, yield boosting, etc

	Aura is a protocol built on Balancer to provide maximum incentives to Balancer liquidity providers and BAL stakers (into veBAL).
	Convex allows Curve liquidity providers to earn trading fees and claim boosted CRV without locking CRV.
	Hyperlock is a yield and metagovernance protocol built on Thruster, providing boosted rewards to Thruster LPs and THRUST stakers.
	IPOR fixes lending and borrowing rates using an interest rate swap with the liquidity pool as a contract counterparty.
	Beefy is a decentralized multi-chain yield optimized that allows users to earn compound interest on their crypto holdings.
	Pendle is a protocol that enables the trading of tokenized future yield on an AMM system.

DeFi

Subcategory Description (cont.)









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

	Four.meme is a streamlined, low-cost memecoin launchpad that enables token deployment on BNB chain.
	PinkSale is a decentralized launchpad that allows users to launch their own token and create their own initial token sale.
	Pump.fun is a token launchpad that allows users to deploy tokens on Solana without having to seed liquidity, using bonding curves.
	Team Finance is a toolkit that helps founders create tokens to raise funds from investors.
	UNCX Network is a one-stop-shop for DeFi solutions and services, including token lockers, liquidity locking, minting, crowdfunding, and more.

DeFi

Subcategory Description (cont.)








Lending: Protocols that allow users to lend and borrow assets.




	Aave is the largest decentralized liquidity market that allows users to borrow and lend assets, earning interest on their deposits.
	Compound is an algorithmic, autonomous interest rate protocol built for developers to unlock open financial applications.
	Fluid is a decentralized lending platform with innovative features including its liquidity layer, automated limits, lending and vault protocols, robust oracle system, and DEX protocol.
	JustLend is a decentralized money market on TRON that allows users to lend, borrow, and earn interest on their deposits.
	Kamino Finance is a DeFi protocol on Solana offering lending, borrowing, and liquidity provision on a single platform.
	Morpho is a peer-to-peer modular lending protocol with isolated lending markets.
	Spark is a lending platform that leverages a credit line from MakerDAO to offer predictable rates for DAI.
	Venus is an algorithmic money market protocol on BNB Chain, for lenders and borrowers with borderless stablecoins.

DeFi

Subcategory Description (cont.)

Liquid Staking Providers: Protocols that allow users to unlock liquidity through LSDs while keeping networks secure.







	Binance provides users who stake ETH and SOL with WBETH and BNSOL, which is yield-bearing in nature.
	Coinbase allows users to stake ETH for cbETH through their wallet.
	Jito is a liquid staking protocol on Solana offering yield through SOL staking and MEV strategies.
	Lido is a liquid staking protocol for proof-of-stake cryptocurrencies like ETH and MATIC.
	Marinade is a Solana liquid staking platform that delegates to 100+ of the best-performing validators.
	Rocket Pool is a decentralised liquid staking protocol for the Ethereum (ETH) ecosystem.
	Sanctum is a liquid staking platform on Solana providing a unified liquidity layer for SOL LSTs.

	Stader is a multichain liquid staking protocol, supporting Ethereum, BNB Chain, Polygon, and more.
	Swell is a non-custodial ETH liquid staking protocol.
	Kiln Finance is an enterprise grade staking platform.

DeFi

Subcategory Description (cont.)







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

	crvUSD is a collateralized-debt-position (CDP) stablecoin pegged to the US Dollar.
	JustStables enables the minting of USDJ on TRON with TRX as collateral.
	ListDAO is a MakerDAO fork on BNB Chain which enables the minting of lisUSD against crypto assets like BNB, ETH, LSTs, LRTs,, and stablecoins.
	Liquity enables the generation of the stablecoin LUSD against ETH as a collateral.
	MakerDAO enables the generation of the largest decentralized stablecoin DAI against crypto collateral assets.
	Ethena is a synthetic dollar protocol built on Ethereum, USDe is backed with crypto assets and corresponding short futures positions.

DeFi

Subcategory Description (cont.)







Restaking: Protocols that leverage staked assets to secure a designated network of participants.

	Eigenlayer is a protocol that enables staked ETH or LSTs to extend cryptoeconomic security to Actively Validated Services (AVS) on the network in return for additional yield.
	Karak enables users to repurpose their staked assets to extend Ethereum as well as other trust networks' security to other applications.
	Picasso is the first censorship-resistant, trust-minimized interoperability solution (Cross-Ecosystem IBC Hub), and also a platform for the first Generalized Restaking Layer.
	Solayer is a shared validator network that secures other Solana-integrated systems.
	Symbiotic is a generalized shared security system enabling decentralized networks to bootstrap powerful, fully sovereign ecosystems.
	Babylon facilitates BTC staking, allowing BTC holders to participate in securing other blockchain networks without smart contracts or bridging.

DeFi

Subcategory Description (cont.)









Liquid Restaking: Protocols that enable liquid positions of restaked assets.



	Ether.fi is a liquid restaking platform that allow users to deposit ETH or LSTs which will be natively restaked on Eigenlayer for yield, providing a liquid restaking token (eETH) in return.
	Kernel DAO provides a liquid restaking token (rsETH) solution for Eigenlayer on Ethereum.
	Mellow Protocol enables permissionless LRT creation allowing for unlimited risk profiles by working with diverse set of AVSes and operators.
	Puffer Finance is a Native Liquid Restaking Protocol (nLRP) built on the innovative EigenLayer, offering a dynamic staking platform for Ethereum users.
	Renzo is a Liquid Restaking Token (LRT) and Strategy Manager for EigenLayer.
	Swell is a liquid staking / restaking provider, allowing users to earn yield without the constraint of locking up capital.

DeFi

Subcategory Description (cont.)

Spot Decentralized Exchange (“DEX”): A peer-to-peer marketplace for trading various assets in a non-custodial manner.




	Uniswap is the largest DEX by volume, allowing users to swap, earn, and build on its platform.
	Curve is a multi-chain AMM-based DEX that allows users to trade at the lowest slippage.
	PancakeSwap is the leading decentralized exchange on BNB Chain.
	Balancer is an automated portfolio manager and trading platform on Ethereum.
	Cetus is a DEX and concentrated liquidity protocol focusing on Move-based ecosystems like Aptos and Sui.
	Raydium is an on-chain order book AMM on Solana.
	STON.fi is a decentralized AMM built on the TON blockchain providing virtually zero fees, low slippage, an extremely easy interface, and direct integration with TON wallets.
	SushiSwap is a fork of Uniswap, functioning as a community-driven DEX for traders and liquidity providers.

	SUNSwap is a TRON-based decentralized trading protocol for automated liquidity provision.
	Thruster is the leading DEX and core liquidity layer on Blast L2.

DeFi

Subcategory Description (cont.)








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

	Polymarket is an information markets platform that lets users trade on the world's most highly-debated topics.
	Augur is a prediction market allowing users to trade world outcomes including sports, crypto, politics, and current events.
	Azuro is an infrastructure/liquidity layer for on-chain predictions.

DeFi

Subcategory Description (cont.)





Derivatives: Protocols that enable users to trade perpetual futures contracts with leverage

	Aevo is a derivatives L2 focusing on options and perpetuals trading.
	Drift is an onchain spot and perpetual trading platform on Solana.
dYdX	dYdX is an open perpetual DEX allowing for margin trading on perpetual contracts.
	GMX is a decentralized spot and perpetual exchange providing low swap fees, zero price impact trades, and leverage positions.
	Hyperliquid is an orderbook perpetual DEX operating on its own Layer 1, the Hyperliquid L1.
	Jupiter is a DEX aggregator on Solana which offers a perpetual trading product.
	RabbitX is a global permissionless perpetuals exchange powered on Starknet.
	Vertex is a vertically-integrated DEX on Arbitrum featuring spot, perpetual, and integrated money markets.

DeFi

Subcategory Description




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

	Certik is a security-focused audit and ranking platform.
	Chainalysis provides blockchain analysis for government agencies, projects, and financial institutions.
	Gauntlet is a financial modeling platform that optimizes capital efficiency, ensures the systemic health of protocols, and mitigates platform risks.
	Zokyo is a Web3 security firm focused on building and securing blockchain-based businesses and projects.

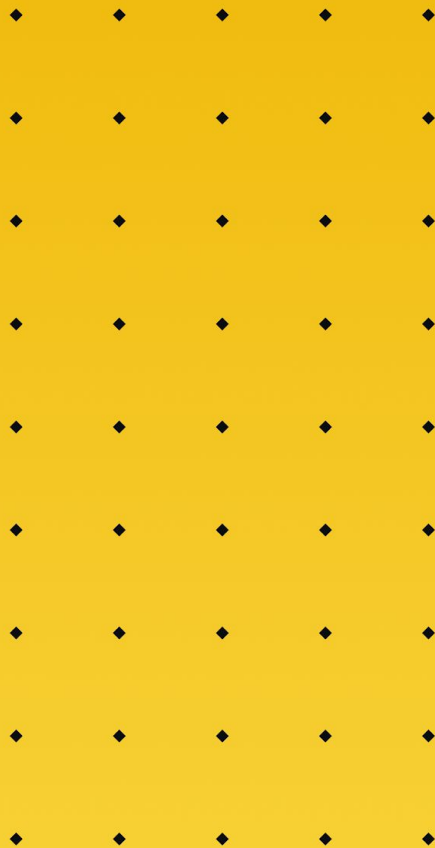
DeFi

Subcategory Description

Insurance: Protocols that aim to provide users with insurance coverage to hedge risks.

	Nexus Mutual is the largest decentralized insurance protocol that covers against smart contract failures.
	InsurAce is a leading multi-chain DeFi insurance protocol that is the first to issue cross-chain portfolio-based covers.
	Solace is a decentralized insurance protocol that provides portfolio coverages for individuals, protocols, and DAOs across multiple chains.

III. 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 listings, 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.



Services

An increasing number of projects are helping users improve their experiences 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

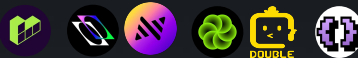


Financialization

Lending



Alternative Ownership



Buy Now, Pay Later



Services

Portfolio Analytics and Appraisal



Membership and Content Gating



Storage



Launchpad












Safety



NFT

Subcategory Description




Open Marketplace: Platforms that allow for any NFTs from any brands to be sold.

	Blur is a NFT marketplace and aggregator designed for pro traders offering 0% marketplace fees.
	Immutable X is a NFT marketplace built on the Immutable X blockchain.
	Magic Eden is a multichain NFT marketplace with 0% listing fees.
	LooksRare is a decentralized NFT marketplace offering community rewards for participating.
	OpenSea is a digital marketplace for crypto collectibles and non-fungible tokens.
	Rarible is an NFT marketplace that is multi chain.
	Sudoswap is an AMM protocol enabling NFT-to-token swaps and vice versa.
	Tensor is an advanced NFT marketplace and aggregator on Solana.
	Unisat is a marketplace on Bitcoin supporting the trading of Ordinals and other Bitcoin assets.



NFT

Subcategory Description (cont.)

Aggregator: Platforms that allow users to easily trade NFT collections from different marketplaces in one central destination.

	Blur is a NFT marketplace and aggregator designed for pro traders offering 0% marketplace fees.
	Opensea Pro , formerly known as Gem, is a low-fee NFT marketplace aggregator. Gem was acquired by OpenSea.
	Element is a community-driven, aggregated marketplace for NFTs across 15 chains.






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

	Foundation is a curated, decentralized NFT marketplace.
	Zora is an NFT marketplace for creators and brands, allowing the minting and trading of NFTs.

NFT

Subcategory Description (cont.)

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







	BendDAO is a decentralized peer-to-pool-based NFT liquidity protocol.
	Blend by Blur enables NFT owners to borrow ETH against their assets with a buy now, pay later feature for NFT purchases.
	JPEG'd is a decentralized lending protocol on the Ethereum network that enables holders to borrow using NFTs as collateral.
	MetaStreet is a protocol that enable liquidity and yield capture from hard to trade on chain assets.
	NFTfi is a peer-to-peer lending protocol.

NFT

Subcategory Description (cont.)

Alternative Ownership:

Protocols enabling users to access and transfer partial or conditional rights to NFTs through fractionalization, derivatives, rental agreements, and options trading.




	Floor Protocol allows people to fractionalize their NFTs into micro-tokens called μ -Tokens.
	Fractional increases accessibility to popular NFTs by enabling collective ownership.
	Nftperp is a perpetual futures DEX for NFTs.
	Wasabi is an Ethereum-based, decentralized, NFT option trading protocol.
	Double Protocol is an NFT rental protocol.
	reNFT is a multi-chain NFT rental protocol that enables uncollateralized renting, lending, and reward sharing.

NFT

Subcategory Description (cont.)

Buy Now, Pay Later (“BNPL”):

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





	Blend by Blur enables NFT owners to borrow ETH against their assets with a buy now, pay later feature for NFT purchases.
	Cyan offers buy now, pay later for NFT purchases with a 25% down payment.
	Teller is an oracle-less lending protocol that has a buy now, pay later system with as little as a 25% down payment.

NFT

Subcategory Description (cont.)




Portfolio Analytics and Appraisal:

Tools that analyze or appraise NFTs.

	CryptoSlam is the leading NFT aggregator, collecting and analyzing data for millions of NFTs across 15+ Blockchains.
	Nansen provides users with crypto and NFT insights through a set of blockchain analytics tools.
	NFTGo is an NFT data aggregator with analytic tools.
	Rarity Sniper is a platform allowing users to track the rarity of NFT collections.




Membership and Content Gating:

Tools that gate access to membership or content using NFTs.

	Audius is a music streaming and sharing platform that puts power back into the hands of content creators.
	Collab.land is an NFT token gating bot for Telegram and Discord with over 8M verified wallets.
	Moongate is a no-code toolkit to create and adopt NFT-gated memberships for brands and events.

Storage:

Solutions for storing NFT data.




	Filebase is a storage platform that allows on-ramp to IPFS and decentralized file storage networks.
	Nft.storage is a long-term storage service designed for off-chain NFT data powered by IPFS and Filecoin.
	Pinata is an IPFS solution for creators and developers.

NFT

Subcategory Description




Launchpad:

Platforms for projects to launch their own NFTs.

	DropSpace is a full-service minting platform that provides the technology to help founders launch their NFTs.
	Mintbase enables users to build their own minters, markets, and NFT redeeming systems.
	LaunchMyNFT is a web based NFT launchpad that is no code.

Safety:

Modules that offer security measures to protocols.

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

IV. Gaming



Gaming

Vertical Spotlights

We identified 4 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 offerings (“IGOs”) launchpads, and developer kits that aim to help creators 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 the player experience by lowering the barriers to exploring and onboarding in crypto-based games.



Analytics

Developments in analytics tools continue to remain pivotal for game developers to make informed decisions.

Gaming

Vertical Overview

Games

Metaverse



Play-to-Earn



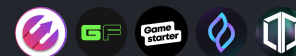
Game Studio



Toolkit



Launchpad



Gaming Guild



Gaming NFT Marketplace



Analytics Tools








Gaming

Subcategory Description

Metaverse:

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







	Otherside is a gamified, interoperable metaverse currently under development that blends MMORPG mechanics with web3-enabled virtual worlds.
	Decentraland is a 3D virtual world where users can create and monetize content.
	The Sandbox is currently the largest metaverse project where players can build, own, and monetize their gaming experiences.
	Illuvium is the world's first Interoperable Blockchain Game (IBG) including an open-world exploration game, industrial city builder, and autobattler on Ethereum.
	StarryNift is an AI-powered co-creation metaverse, offering users a 3D virtual experience for play, creation, and socialization.

Gaming

Subcategory Description (cont.)

Play-to-Earn:

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







	Catizen is a hypercasual play-to-earn game on Telegram where players manage a virtual cat city.
	Hamster Kombat is a tap-to-earn game on Telegram involving strategic decisions and the management of a virtual crypto exchange.
	Pixels is a Web3 social gaming platform on the Ronin Network, blending farming, exploration, and community building in an open-world universe.
	Seraph is an action role-playing game (ARPG) with hack-and-slash combat mechanics, allowing for item customization tailored to user playstyles.
	World of Dypians is a massive multiplayer online role-playing game (MMORPG) set in a vast digital realm.
	Axie Infinity is a virtual world filled with cute, formidable creatures known as Axies, Axies can be battled, collected, and even used to mine tokens through gameplay.

Gaming

Subcategory Description (cont.)






Game Studio:

Studios that specialize in developing crypto-based games. The games listed are not meant to be exhaustive.

 Dapper	Dapper: CryptoKitties, NBA Top Shot, NFL All Day, UFC Strike, etc.
	Gala Games: Champions Arena, Eternal Paradox, Meow Match, etc.
	Immutable: Gods Unchained, Guild of Guardians, Shardbound, etc.
	Nakamoto Games: Brawler Master, Naka Connect, Naka Rider, etc.
	Parallel Studios is a sci-fi game studio known for the Parallel TCG, the AI-driven simulation game Colony, and the extraction shooter Sanctuary.
	Sky Mavis Labs is a Vietnamese game studio that develops online video games to create virtual worlds with player owned-economies.

Launchpad:

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





	Gamestarter is a Web3 gaming hub pioneering a dynamic ecosystem to empower the next wave of gaming.
	Gamefi is a game-dedicated launchpad that conducts Initial Game Offerings (IGO) for game projects to get first access to game assets and engage with the GameFi community.
	TrustPad is a decentralized multi-chain fundraising platform enabling projects to raise capital and promise safety to early stage participants.
	Seedify is a leading Web3 Gaming Incubator and Launchpad for Web3 projects focusing on innovative technologies such as DeFi, AI, Big Data, NFTs and Web3 Gaming.
	Enjinstarter is a metaverse and Web3 gaming launchpad offering advisory, IDOs, incubation, and fundraising services for projects.

Gaming

Subcategory Description (cont.)

Toolkit:

Tools for incorporating crypto-based economies into games.






	CARV Protocol is a modular data layer that facilitates data exchange and value distribution across the gaming and AI sectors.
	Enjin offers a suite of integrated products that make non-fungible tokens (NFTs) easy for individuals, businesses, and game developers.
	Moralis Unity SDK provides full wallet and blockchain integration for Unity Games.
	Mud is an engine for building multichain autonomous 2D worlds.

Gaming

Subcategory Description (cont.)






Game NFT Marketplace:

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

	AirNFTs is a cross-chain gaming NFT marketplace on BNB Chain, Fantom, Polygon and Ethereum.
	Atomic Hub is an NFT marketplace on Wax, Immutable and EOS networks.
	dMarket enables secure buying, selling, and trading of in-game NFTs.
	Immutable Marketplace is a leading NFT marketplace on Immutable X for NFT and blockchain gaming.
	TokenTrove is a premier NFT marketplace on Immutable X.

Gaming Guild:

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




	Avocado DAO focuses on investing in NFT assets within games and emergent metaverses, NFT platforms, and P2E games.
	Good Games Guild is a leading gaming hub for blockchain-based games.
	Zentry is a unified play layer that bridged players, agentic AI and blockchains, opening a new world of AI driven gamification.
	Merit Circle is A DAO developing a Web3 ecosystem for gaming, offering tools like Beam, a specialized blockchain for gaming, and various applications for enhanced gaming experiences.
	Yield Guild Games is a play-to-earn gaming guild for investing in non-fungible tokens (NFTs) used in virtual worlds and Web3 games.

Gaming

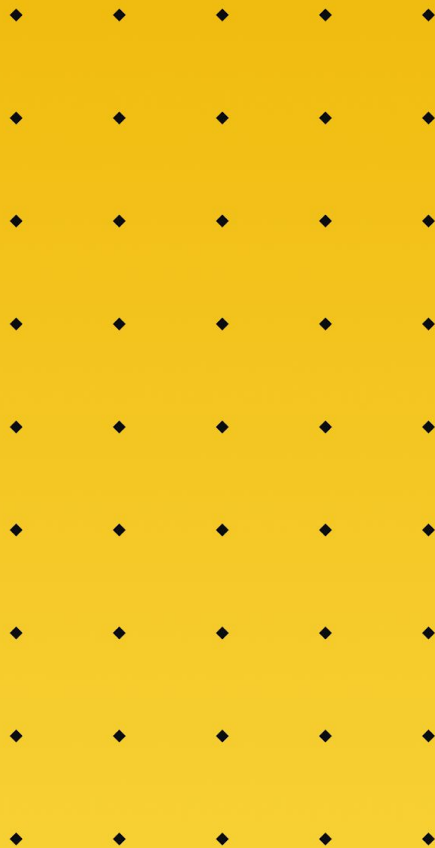
Subcategory Description

Gaming Analytics:

Platforms that provide data insights on the Web3 gaming landscape.

	Chainplay.GG is a one-stop hub for all things blockchain gaming.
	DappRadar is an analytics platform that offers the latest data on various Dapps.
	P2E Analytics is an NFT gaming research hub that provides on-chain and off-chain data on Web3 games.

V. Bitcoin Finance ("BTCFi")



BTCFi

Vertical Spotlights

We identified 3 key areas of innovation.



Infrastructure

Enables the Bitcoin ecosystem to scale and operate efficiently without sacrificing security or decentralization. Key innovations include wallet service providers that simplify user access, roll ups and side chains that offload transaction processing from the main chain to increase throughput and reduce fees, and interoperability protocols that connect Bitcoin with other blockchains and DeFi platforms



Bitcoin Assets

Expand Bitcoin's utility by enabling the creation, ownership, and exchange of unique on-chain assets. This includes marketplaces for trading NFTs and collectibles, runes and ordinals that embed data and metadata directly on Bitcoin, and protocols that unlock new forms of digital scarcity and provenance.



Applications

Bring DeFi capabilities to Bitcoin, offering financial services such as staking and restaking to secure networks, lending and borrowing platforms that provide liquidity, stablecoins that enable price stability, and decentralized exchanges (DEXes) that facilitate trustless asset swaps—all designed to enhance Bitcoin's role as a programmable financial layer.

BTCFi

Vertical Overview

Infrastructure

Wallet Service Providers



Roll Ups



Side Chains



Bitcoin Assets

Marketplace



Runes



Ordinals



Applications

Staking/Restaking



Lending/Borrowing



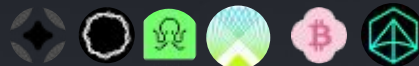
Stablecoins



Dexes







Bridges



Subcategory Description

Wallet Service Providers:

Essential infrastructure for managing Bitcoin assets, with a user intuitive interface.







	Xverse is a wallet that allows users to store, send, and receive Bitcoin based assets.
	Orange is a DeFi ecosystem of products to help users access and manage their Bitcoin based assets.
	Leather Wallet is a self custodial wallet built for earning yield and managing assets in the Bitcoin ecosystem.
	Satonomy is a Bitcoin transactions management platform that simplifies complex Bitcoin transactions and asset management.

BTCFi

Subcategory Description (cont.)

Roll Ups:

Layer 2 scaling solution that process transactions off chain and then summarize the data, along with a proof of validity to the main Bitcoin blockchain.

	Bsquared is an EVM compatible Bitcoin layer 2 that uses a zk proof verification to perform rollups on Bitcoin.
	GOAT Network is a Bitcoin ZK rollup that unlocks native yield on Bitcoin.
	Merlin Chain is a ZK rollup for Bitcoin, allowing for EVM compatible smart contract development within the Bitcoin ecosystem.
	Citrea is rollup that enhances the capabilities of Bitcoin blockspace with zero knowledge technology.
	Alpen is an EVM blockchain that uses Bitcoin as the source of truth for state commitments and proof of valid state transitions.
	Satochain is an Optimistic rollup for Bitcoin Layer 2 that integrates the Rune standard.

BTCfi

Subcategory Description (cont.)

Side Chains:

Independent blockchains that operate alongside the main Bitcoin blockchain.






	Rootstock is a Bitcoin sidechain that combines the security of Bitcoin with smart contract functionality.
	Stacks is a sidechain that enables smart contracts and decentralized apps to be built on top of Bitcoin.
	Core is a Bitcoin sidechain that is a proof of stake layer for Bitcoin.
	Side Protocol is an extension layer of Bitcoin utilizing a dPoS consensus.
	Liquid Network is an open source Bitcoin sidechain and layer 2 solution that is interoperable with lightning.
	Mercury Layer is an implementation of the statechain protocol allowing for off chain transfers and settlements of Bitcoin.

BTCFi

Subcategory Description (cont.)

Marketplace:

Intermediaries that connect buyers and sellers of Bitcoin based assets.






	Mintpark is an NFT marketplace built for Bitcoin layer 2 networks, enabling seamless NFT launching, trading, and bridging across Bitcoin L2s.
	UniSat is Bitcoin service provider that supports inscription assets.
	Ordinals Wallet is a non-custodial Bitcoin wallet and marketplace.
	Gamma is an open marketplace for Bitcoin NFTs.
	Magic Eden is a cross chain NFT marketplace and dApp for creators and collectors to discover, trade, and create NFTs.

BTCFi

Subcategory Description (cont.)

Runes:

A fungible token protocol that allows for the creation and management of tokens directly on the Bitcoin blockchain.





	Runes Terminal is a platform enhancing the Runes ecosystem by providing tools and support.
	RuneX is a social blockchain ecosystem, with focus on Runes, Ordinals and Bitcoin innovations.
	RuneMine is a multi chain bridge designed to connect the Runes protocol, Solana, and BTC L2s.
	Ordzaar is a Bitcoin Ordinals launchpad powered by the ZAAR rune token.
	Taker unlocks BTC liquidity on layer 2s by supporting liquidity pools of BRC20 assets.

BTCFi

Subcategory Description (cont.)

Ordinals:

A method of inscribing data onto individual satoshis, the smallest unit of Bitcoin.







	Ordinals protocol allows for the inscriptions of data onto each satoshi, transforming them into unique digital assets.
	Ordiscan is an ordinals explorer that provides on-chain record analysis services for Bitcoin assets.
	Bitcoin punks is a NFT collection on Ordinals of the original Ethereum Crypto Punks NFT.
	Bitcoin puppets is a collection of 10001 unique PFPs hand drawn in MS Paint by a 12 year old.

BTCFi

Subcategory Description (cont.)

Staking/Restaking:

Locking up of Bitcoin to secure other protocols and networks to earn rewards..







	Babylon is a decentralized protocol that enables Bitcoin to be staked directly on its native blockchain.
	Chakra is a modular settlement network that enables secure bridging of native BTC and BTC derived assets across ecosystems.
	Master Protocol is a modularized restaking protocol aimed at encompassing all LSTs across various chains.
	Stroom is a Bitcoin liquid stacking protocol for BTC native yield generation through the lightning network.
	Lisa is a platform that facilitates liquid staking for assets on the Stack blockchain.
	Solv Protocol is a Bitcoin staking platform powered by its innovative Staking Abstraction Layer(SAL).

BTCFi

Subcategory Description (cont.)

Lending/Borrowing:







DeFi protocols built on blockchain technology, offering services like lending, borrowing, trading, and liquidity provision without relying on traditional financial intermediaries, enabling users to use their BTC to interact with smart contracts.

	Badger DAO enables Bitcoin to be used as collateral across DeFi on Ethereum.
	Sovryn is a decentralized platform for Bitcoin trading and lending.
	Avalon is a CeDeFi platform that provides Bitcoin holders with instant liquidity and fixed borrowing rates.
	Zest is a Bitcoin lending protocol that allow users to deploy their assets on chain and generate yield.
	Interlay is a decentralized network that connects Bitcoin to other Defi Platforms.
	Liquidium is a decentralized platform that allows users to borrow Bitcoin against their Ordinals, Runes and BRC-20 tokens.

Subcategory Description (cont.)

Stablecoins:






BTC collateralized stablecoins are digital assets pegged 1:1 to a fiat currency like USD, but backed by Bitcoin reserves.

	Money On Chain is a 100% Bitcoin collateralized stablecoin.
	Satoshi Protocol is a universal stablecoin protocol powered by satUSD, a Bitcoin backed stablecoin.
	Plasma is a high-throughput, scalable blockchain purpose built for stablecoins on Bitcoin .
	Palladium is a censorship resistant USD pegged coin built on Bitcoin.
	Shell Finance is a decentralized stablecoin system built on Bitcoin.
	Ducat is a Bitcoin L1 native, decentralized stablecoin.

Subcategory Description (cont.)

Dexes:

A peer to peer marketplace consisting of Bitcoin related assets where transactions occur directly between traders.







	Bitflow is a decentralized aggregator for users to trade, earn, and borrow with BTC.
	Bisq is a decentralized Bitcoin exchange network where users can buy and sell BTC privately and securely.
	Satflow is a mempool trading platform for Ordinals and Runes.
	Stackswap is a decentralized exchanged powered by the Stacks blockchain.
	Alex is an AMM DEX on the Stacks Chain with a cross-chain bridge that aggregates liquidity across L2s.

BTCFi

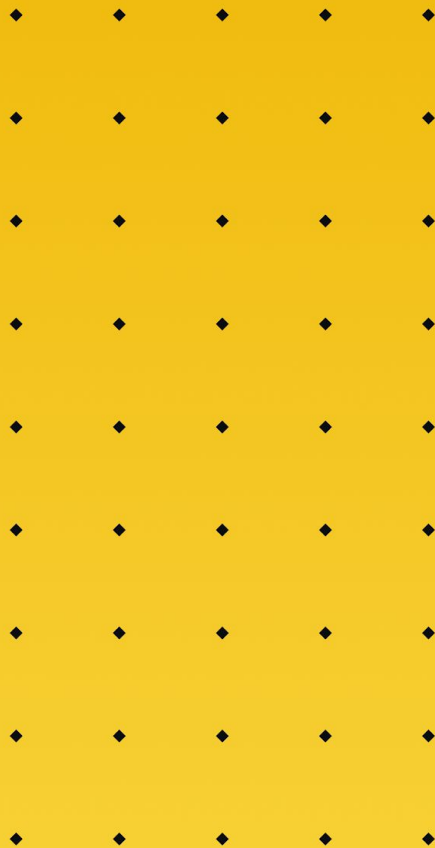
Subcategory Description (cont.)

Bridges:

Enables the transfer of BTC from the Bitcoin blockchain to other blockchains.

	Stargate is a liquidity layer that allows the secure movement of tokenized assets between 70+ blockchains,
	Portal is a custody less cross-chain infrastructure for native Bitcoin.
	Symbiosis is a cross-chain AMM DEX that pools together liquidity from different networks.
	MultiBit is a cross-chain bridge dedicated to the ecological interoperability between the BTC chain and other chains.
	Garden is a secure, decentralized BTC bridge enabling cross-chain swaps in 30 seconds with zero custody risk.
	zkBridge is a cross-chain bridge that enables secure and trustless communication between different blockchain networks, including Bitcoin, by leveraging zero-knowledge proofs.

VI. Decentralized Financial AI (“DeFAI”)



DeFAI

Vertical Spotlights

We identified 3 key areas of innovation.



Infrastructure

These projects provide the foundational frameworks and protocols that enable seamless integration of AI with decentralized finance. These innovations ensure secure, scalable, and interoperable environments where AI-driven DeFi applications can operate efficiently.



Platforms

These platforms facilitate user access and interaction with AI-powered DeFi services. They simplify complex AI functionalities, making them more accessible and composable within the DeFi ecosystem.



AI Agents

AI agents drive advanced capabilities such as market analysis, yield optimization, investment automation, and portfolio management. These intelligent agents leverage AI to enhance decision-making, maximize returns, and automate complex financial strategies in decentralized environments.

DeFAI

Vertical Overview

Infrastructure

Frameworks



Agent Protocols



Platforms

Agent Marketplaces



Agent Networks



Abstraction



AI Agents

Market Analysis



Yield Optimisation



Investment Automation



Portfolio Management









DeFAI

Subcategory Description

Frameworks:

Set of tools, libraries and methodologies designed to facilitate the development, management and operation of AI agents.

	ElizaOS is an open-source framework for multi-agent development and deployment.
	FreysaAI is a sovereign AI agent that aims to enable widespread agent sovereignty through the sovereign agent framework.
	DeAgent is a distributed decision making framework that ensures AI agents operate with consensus, identity and continuity.
	Paal enables users to build advanced AI applications and deploy them across multiple platforms.
	Olas incentivises the creation of open-source autonomous AI agents, enabling everyone to own and monetize their own AI agents.
	Arc is an open-source framework that is designed to facilitate the creation of modular and scalable artificial intelligence applications.

DeFAI

Subcategory Description (cont.)

Protocols:

Set of rules and guidelines to define how agents interact with each other and their environment.






	Virtual's Agent Commerce Protocol is an open standard for multi-agent commerce and coordination that leverages the blockchain.
	Ava Protocol enables the secure, decentralized execution of Ai agent tasks with verifiable triggers.
	AI Network is a blockchain designed for hyper agents consisting of layer 1 and layer 2.
	Quill AI Network is a trust and security layer for AI agents and web3.

DeFAI

Subcategory Description (cont.)

Agent Marketplaces:

A platform where AI agents created by developers are hosted and made available to users.





	AGNT.Hub is an omni chain AI agent ecosystem that allows users to deploy and scale AI agents directly from X.
	Creator Bid is a platform that is designed to empower creators to create, monetize, and co-own AI agents.
	Holoworld is a platform that enables users to create AI-powered virtual characters and integrate them into various applications, focusing on tools to turn agents into entertainment brands.
	Pearl by Olas is a desktop based solution that allows users to fully control their agents' on chain activities.
	Virtuals is a decentralized platform for creating, trading, and managing digital AI agents and virtual entities using blockchain technology.

DeFAI

Subcategory Description (cont.)

Agent Networks:

A network of specialized autonomous AI agents that is coordinated to execute complex on-chain actions.






	Griffain is an AI engine consisting of a network of agents that helps users simplify blockchain interactions by allowing AI agents to handle complex tasks.
	Theoriq is a decentralized protocol for coordinating AI agent swarms with a focus on agents that provide financial utility.
	Wayfinder is an AI agent network built on Solana to simplify interactions with blockchains and make on chain tasks more accessible.
	Olivia AI is an AI super app that integrates advanced artificial intelligence with blockchain functionality to address key challenges in the crypto space.

DeFAI

Subcategory Description (cont.)

Abstraction:

Conversational AI tool wrapped over a LLM to provide aggregated information and simplify DeFi interactions.







	HeyAnon combines conversational AI with real-time data aggregation to enable users to manage DeFi operations and analyze trends across various projects.
	Infinit is a AI powered DeFi intelligence platform that simplifies DeFi by helping users discover, evaluate, and execute DeFi opportunities through AI agents.
	Elsa AI is crypto co-pilot designed to help blockchain users make informed decisions through a user-friendly interface.
	Capminal is an AI driven terminal that delivers lightning fast swaps, token deployment and real time DeFi insights using natural language.
	Hive Intelligence is a sophisticated search engine that allows users and AI agents to access, interpret, and utilize blockchain data with ease and depth.

DeFAI

Subcategory Description (cont.)

Market Analysis:

Providing insights and analysis using real time market data.






	AIXBT is an AI agent that leverages AI to analyze social media, news, and crypto community interactions to provide real time market insights and trends..
	Gloria AI delivers curated, real time data and market news to power trading.
	AgentXYZ is a trading terminal powered by 28 AI agents that delivers comprehensive insights across technical analysis, on chain data, social sentiment and market fundamentals.
	Polytrader is a platform that supplies Ai powered assistance for Polymarket trades, combining sentiment analysis, tailored market discovery and detailed bet sizing.
	Kwantxbt is an AI agent trained on technical analysis and is able to analyze charts and provide valuable data like entries, targets, and stop losses.
	Siren is an AI agent on the BNB chain that offers real time market insights and data driven signals.

DeFAI

Subcategory Description (cont.)

Yield Optimization:

Provide aggregated yield across multiple protocols and blockchains to maximize returns.






	Ensofi is a cross chain DeFi hub that enables users to access the best yield opportunities across multiple chains using their suite of agents.
	Piggy is an AI agent that provides optimal strategies and granular data on Superform vaults, assisting with yield discovery.
	Maneki is DeFi AI agent built by Rivo that assist users in discovering, analyzing and managing yield opportunities across multiple blockchains.
	BakerFi is a decentralized protocol that amplifies yield potential through agent managed vaults.
	Noya executes scalable omni chain DeFi strategies using AI and ZKML to optimize yields, diversity risk and maximize rewards.

DeFAI

Subcategory Description (cont.)

Investment Automation:

Using autonomous AI agents to execute investment strategies or DeFi actions.





	Bankr is an advanced AI agent that focused on simplifying the process of buying and selling digital assets by sending a message.
	Orbit is a comprehensive DeFi companion that coordinates and executes on chain actions based on a user's prompt in natural language.
	Giza is an autonomous software that consists of non custodial algorithmic agents that execute sophisticated DeFi strategies.
	Nexy AI is an AI agent designed for smart trading decisions on Solana.
	Bella Protocol is a DeFi platform that aims to simplify and democratize the use of DeFi products by using AI agents to automate on chain actions.

DeFAI

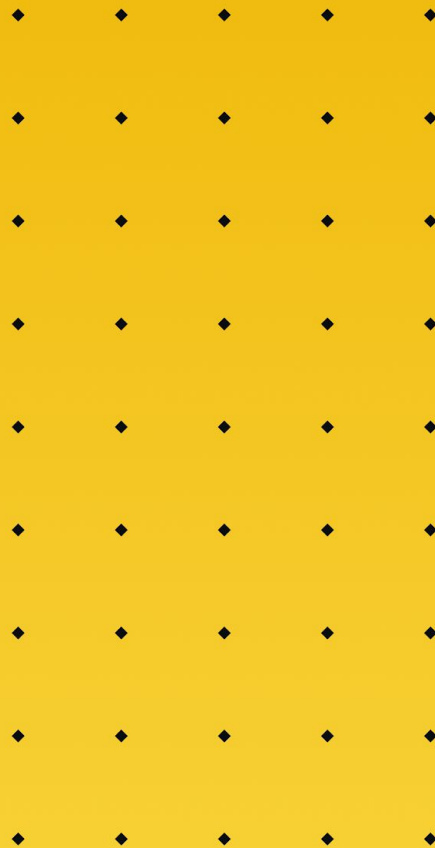
Subcategory Description (cont.)

Portfolio Management:

Analyze data, identify patterns and make data-driven investment decisions while managing risks and enhancing asset allocation .

	VaderAI is an agentic investment DAO that aims to leverage AI-powered systems to manage decentralized investments in the agentic economy.
	AI16Z is a venture capital DAO led by AI agents that aims to use AI and collective intelligence for investment decisions.
	Singularity DAO is an decentralized portfolio management protocol that uses AI to manage portfolios and execute efficient asset allocation.
	DeFAI is a DeFi platform that leverages AI to make autonomous investments and analyze portfolios.

VII. Privacy



Privacy

Vertical Spotlights

We identified 3 key areas of rapid innovation within the privacy sector.



Infrastructure

Infrastructure forms the foundational layer of the Web3 privacy ecosystem, providing the essential cryptographic and computational tools that enable privacy-preserving technologies.



Middleware

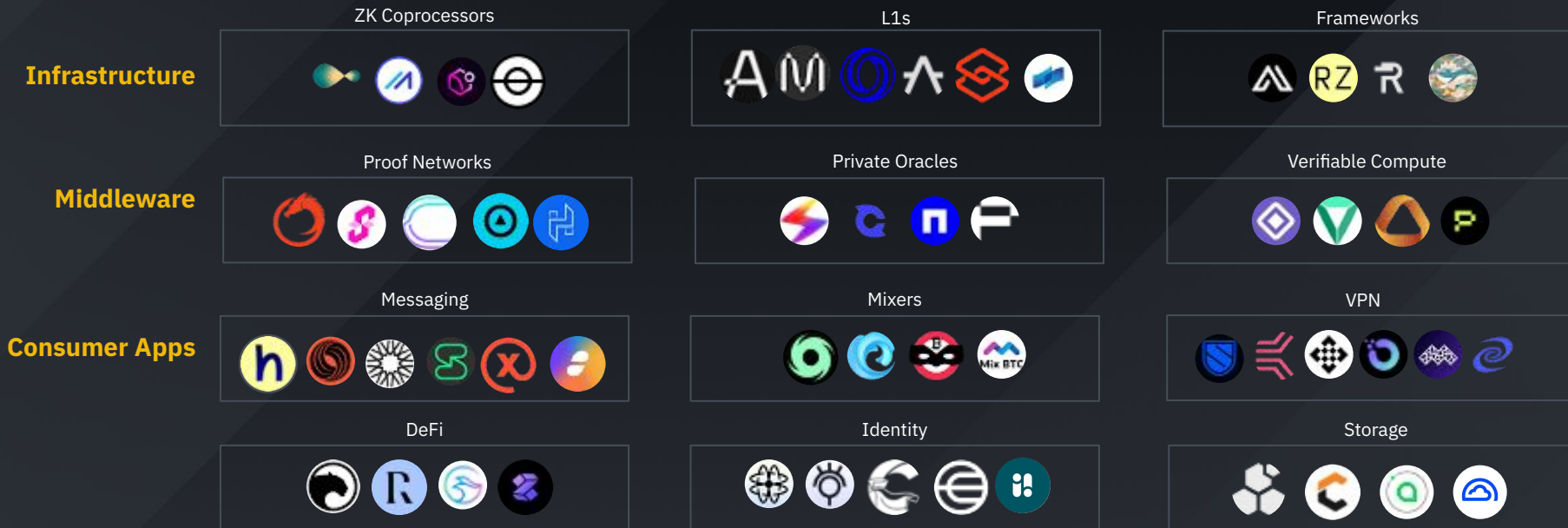
Middleware refers to software layers or platforms that act as intermediaries between decentralized applications, blockchain networks, and end-users or developers.



Consumer Apps

Consumer Applications focuses on end-user tools and services that leverage privacy infrastructure and networks to deliver secure, private, and user-centric experiences.

Privacy Vertical Overview







Privacy

Subcategory Description

ZK Coprocessors:







Processors that operate alongside an onchain contract to expand the compute power of the system and provide ZK proofs of the processed outcomes.

	Lagrange is a ZK coprocessor that allows developers to build and scale apps with off chain verifiable compute.
	Marlin is a verifiable computing protocol featuring TEE and ZK based coprocessors to delegate complex workloads over a decentralized cloud.
	Space and Time is a subsecond ZK coprocessor that allows smart contracts to query on chain and off chain at scale and verify the results with cryptographic proofs.
	Brevis is an efficient, verifiable off chain computation engine powered by zero knowledge proofs.

Privacy

Subcategory Description (cont.)

L1s:
The base layer blockchain protocol that processes and finalizes transactions directly on its own mainnet





	Aleo is a blockchain that focuses on enabling privacy in dapps using zero knowledge proofs.
	Mina is a lightweight zero knowledge blockchain for proving anything.
	Oasis Network is a layer 1 blockchain designed to be uniquely scalable, privacy-first and versatile.
	Aleph Zero is a privacy layer for web3 that provides foundational infrastructure for scalable, privacy-first solutions.
	Secret Network is a blockchain with privacy-preserving smart contracts.
	Coti Network is a fast and light privacy layer powered by the breakthrough cryptographic protocol Garbled Circuits.

Privacy

Subcategory Description (cont.)

Frameworks:

Set of tools, libraries and methodologies designed to facilitate the development, management and operation of zero knowledge applications.






	Axiom is a performant and modular zkVM framework built for customization and extensibility.
	Risc Zero is a zero knowledge verifiable general computing platform based on zk STARKs and the RISC-V microarchitecture.
	Railgun is a smart contract system that enables zero knowledge privacy for any on chain dapp.
	zkWASM is a zero knowledge proof enabled web assembly virtual machine that enables verifiable and trustless computation.

Privacy

Subcategory Description (cont.)

Proof Networks:

Decentralized or distributed systems that generate, aggregate, and verify cryptographic proofs—often zero-knowledge proofs (ZKPs)—to enable privacy-preserving operations on blockchain networks..





	Orochi Network is a verifiable data infrastructure utilizing a verifiable data pipeline and zk rollups for secure and verifiable data processing.
	Succinct is a decentralized proof network, enhancing verifiability through an novel incentive mechanism called proof contests.
	Cysic is a real time ZK proof generation layer with state of the art hardware and proof network.
	Zerobase is a decentralized proving network that turns privacy computation into real user yield.
	Herodotus is a storage-proof technology and infrastructure tool that enables cross domain data access between Ethereum layers via an API.

Privacy

Subcategory Description (cont.)

Private Oracles:

Oracle services that provide external data to smart contracts while preserving the privacy and confidentiality of the data being transmitted through the use of cryptographic techniques.





	Switchboard is a decentralized oracle network that enhances Web3 privacy and security by leveraging confidential computing to protect sensitive data and ensuring verifiable data feeds for blockchain applications.
	Clique uses TEEs, or secure enclaves, to validate, encrypt, and process the data for ZK query proofs to secure TLS oracles.
	Nillion is a secure computation network that decentralizes trust for high-value, sensitive, and private data in the same way that blockchains decentralize transactions.
	zkPass is an oracle protocol that enables private internet data to be verifiable on-chain, built on top of zkTLS.

Privacy

Subcategory Description (cont.)

Verifiable Compute:

Platforms that perform computations and then generate a proof that the computation was done correctly, which can be efficiently verified by another party without re-executing the entire computation.







	Aztec is a privacy focused layer 2 protocol built on Ethereum that uses zero knowledge proofs to verify computations without revealing inputs.
	TrueBit is protocol that enables verifiable off-chain computation by allowing anyone to challenge incorrect computations, ensuring correctness.
	Automata is privacy-focused Layer 1 solution that provides middleware services for Web3 decentralized applications.
	Phala is a decentralized cloud computing platform focused on privacy and scalability for Web3 applications.

Privacy

Subcategory Description (cont.)

Messaging:

Decentralized communication platforms that enable secure, private, and censorship-resistant exchange of messages between users.





	Hopr is a privacy-preserving messaging protocol which enables the creation of a secure communication network.
	Skiff is a private, encrypted, secure email service.
	Waku is a family of robust, censorship-resistant, peer-to-peer communication protocols that enable privacy-focused messaging for web3 applications.
	Session is a private messenger that aims to remove any chance of metadata collection by routing all messages through an onion routing network.
	XMTP is the largest and most secure decentralized messaging network.
	Status is a secure wallet and communication tool, combining crypto wallet, messaging and communities.

Privacy

Subcategory Description (cont.)

Mixers:

Privacy-enhancing protocols that obfuscate transaction trails by pooling and redistributing cryptocurrency funds to improve user anonymity.







	Tornado cash is a secure, non-custodial tumbler solution designed to enable private transactions.
	UniJoin is a crypto mixer that restores anonymity to your crypto funds using coinjoin technology.
	Coinomize is a mixing service that allows Bitcoin owners to disguise their Bitcoin transactions.
	MixBTC is a Bitcoin mixer that allows anyone to send their Bitcoins and receive new coins in return.

Privacy

Subcategory Description (cont.)

VPN:

Decentralized virtual private networks that provide secure, encrypted internet access by routing traffic through distributed nodes, enhancing privacy and resistance to censorship.





	Sentinel is a decentralized virtual private network built on top of the cosmos blockchain, allowing users to connect to the internet privately and securely by routing their traffic through a network of distributed nodes.
	KelVPN is a decentralized, quantum resistant VPN service that provides the highest level of protection for your network connection.
	Lokinet is an onion-router that lets you access the internet anonymously.
	Orchid is a decentralized VPN infrastructure and protocol.
	Mysterium is a peer-to-peer network that is tamper-proof, anonymous and encrypted.
	Deeper is the world's first decentralized hardware VPN that delivers enterprise grade cybersecurity and privacy protection.

Privacy

Subcategory Description (cont.)

DeFi:

Financial applications on blockchain networks that enable private, secure, and trustless financial transactions and services.






	Panther is building a modular solution for financial service providers to operate private trading zones with customizable rules.
	Renegade is an on-chain dark pool, a new type of decentralized exchange.
	Manta is a multi-modular ecosystem leveraging advanced cryptographic techniques, engineered to enable the development of high-performance decentralized applications.
	ZKBase is a ZK rollup based layer 2 DEX with an AMM model.

Privacy

Subcategory Description (cont.)

Identity:

Blockchain-based solutions that enable users to create, manage, and verify digital identities in a secure, user-controlled, and privacy-preserving manner..





	Holonym makes security and privacy more usable in zero trust environments by allowing anyone, anywhere to create human keys for easy onboarding.
	Sismo enables users to aggregate their identity and selectively disclose personal data to apps with sismo connect.
	zCloak is a decentralized identity tool across multiple blockchains, ensuring a robust and reliable login experience.
	World is a network of real humans built on an anonymous proof of human and a globally inclusive financial network.
	ZKme is a provider of zero-knowledge (ZK) identity verification solutions for Web3 developers, offering a decentralized and privacy-first approach to KYC and AML compliance.

Privacy

Subcategory Description (cont.)

Storage:

Decentralized data storage platforms that distribute and secure user data across a network of nodes, ensuring censorship resistance, redundancy, and data integrity.

	Swarm is a decentralized data storage and distribution technology.
	Crust provides a decentralized storage system network of web3 ecosystem on the EVM.
	Sia is a decentralized cloud storage software solution engineered to provide privacy-focused, redundancy and enterprise-level scalability.
	Storj is a decentralized cloud storage solution prioritizing security and privacy.

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.



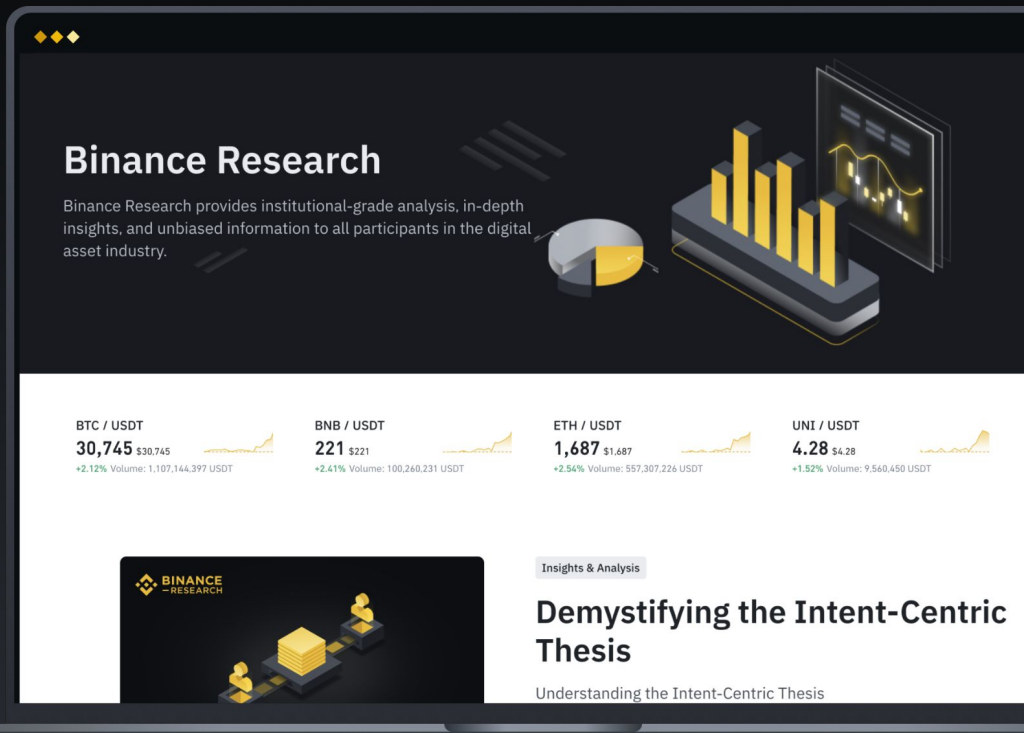
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