

One River Digital Pulse



15 FEBRUARY 2023

One River Digital
Research

Weekly Pulse – Ethereum’s Path

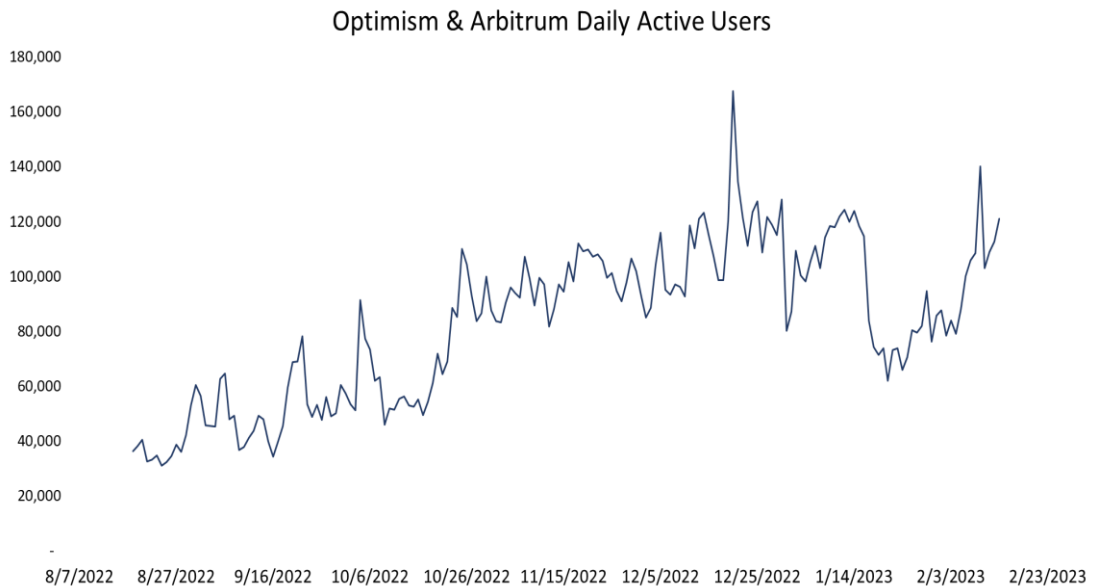
Ethereum’s Path: The Ethereum network gained first-mover advantage in DeFi and NFTs in 2015. However, as utilization accelerated, the limitations of the Ethereum network also became apparent. Slow transaction speeds with high fees were a severe bottleneck to crossing the adoption chasm. Blockchain developers have long faced the challenge of reaching scalability while maintaining security and decentralization. In Ethereum’s case, a [modular](#) approach to the ecosystem became the preferred choice. Ethereum scaling solutions emerged, offloading transaction execution away from the base layer. The benefits are significant, with lower costs and significantly higher throughput. But this has also driven Ethereum’s [Pulse](#) to a low score of 37 over the past year. It’s misleading. While active users and transfers have been sluggish, at Pulse scores of 25 and 48, respectively, the Ethereum ecosystem is solidifying its new direction. Layer 2s, like Optimism and Arbitrum, have gained traction, soaring in transaction volume and users. The Pulse’s top performer, Polygon, has been the scaling solution of choice for high-profile enterprises looking to expand their offerings to users. This growing utilization of layer 2s is partly due to the maturing of the developer tooling – projects can easily interoperate on Ethereum. The launch of Polygon’s [ZkEVM](#) next month will mark another significant step. And as scaling solutions mature, so do the prospects for mainstream adoption.

WEEKLY BEATS

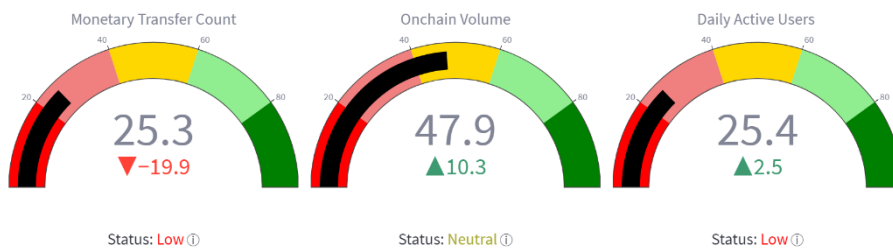
1. Chart of the Week – Rising Layer 2 Activity
2. Fundamental Pulse – Neutral
3. Users Bridging from Ethereum to Layer 2s
4. Ethereum Smart Contract Deployment
5. Ethereum Supply Dynamics

1. RISING ETHEREUM LAYER 2 ACTIVITY

While the Ethereum Pulse Scores suffered declines over the past month, other components of the ecosystem, have made considerable progress. Optimism and Arbitrum accounted for almost 50% of the total Ethereum-based transactions by the end of Q4 2022.

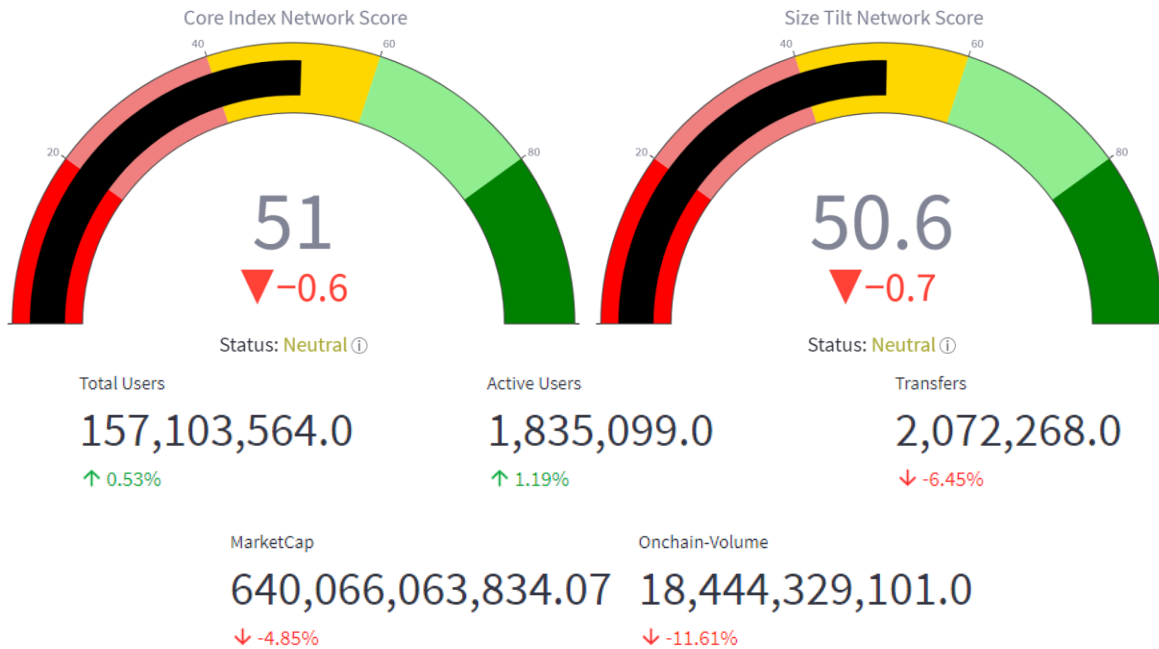


Ethereum Pulse Scores



Source: Token Terminal. One River Digital Pulse (Snapshot date 2/15/2023).

2. FUNDAMENTAL PULSE – NETWORK PERFORMANCE



Despite price declines over the past week, fundamentals remain almost unchanged. Both Core and Size Tilt Index scores are neutral.

Assets	Asset Score	7d Change	30d Change	Volume	Transfers	Active Users	User Growth	Valuation	Velocity	Network Distribution
Core	51	-1	0	31	53	44	64	25	44	94
Size Tilt	50	-1	1	37	52	44	53	35	41	91
Bitcoin	57	0	2	22	65	56	79	12	63	100
Ethereum	37	-2	-4	46	28	19	40	45	1	82
Cardano	60	-4	4	62	33	27	33	62	100	100
Polygon	52	-1	2	60	69	63	11	67	1	96
Litecoin	53	3	5	14	69	72	28	47	85	57
Stellar	53	0	7	52	65	52	64	39	1	100

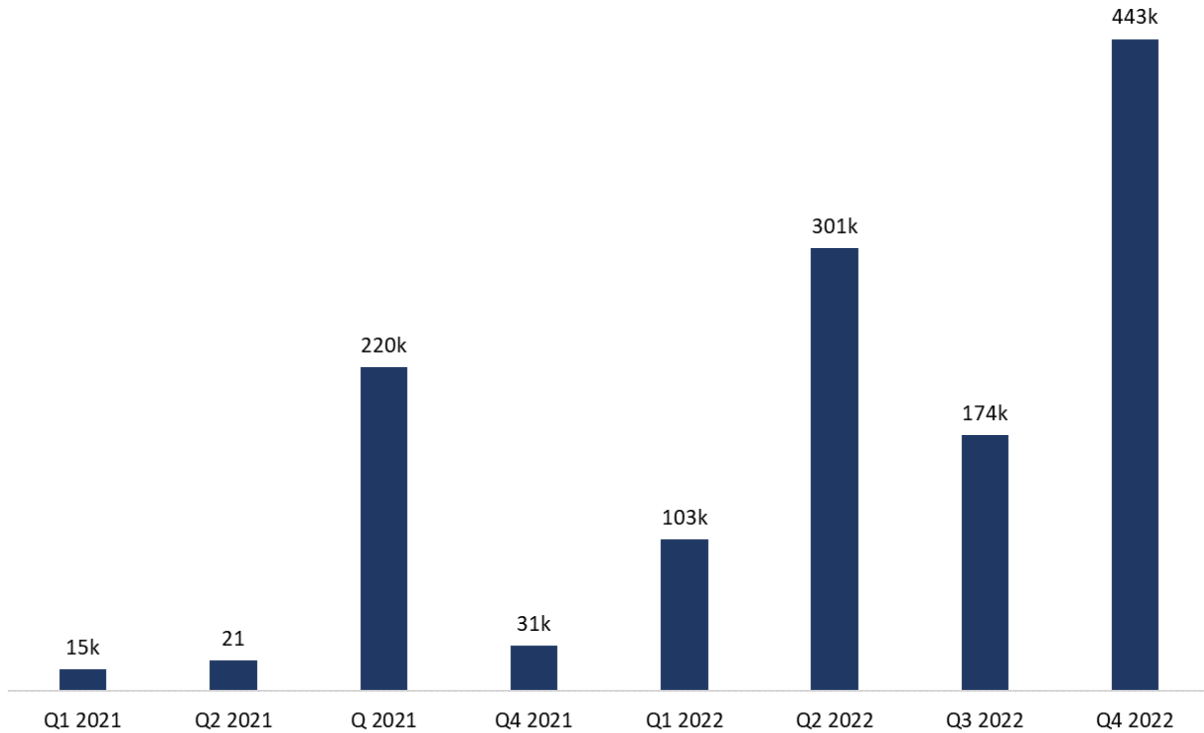
*Snapshot from the One River Digital Pulse on 2/14/2023. Seven-day change in the Core and Size-Tilt Index Scores.

Notes: Status- High > 60, Neutral 40 to 60, Low < 40. A score of 54.5 means the Index value is better than 54.5% of its values in the past 365 days. Index scores exclude Solana, Cosmos, and Polkadot due to incomplete data coverage.

3. USERS BRIDGING FROM ETHEREUM TO LAYER 2s

According to Alchemy, over one million users bridged from Ethereum to Optimism, Arbitrium, Starknet, or zkSync in 2022. The growing interactions between Ethereum and Layer 2s owe to the superior transaction throughput and lower costs.

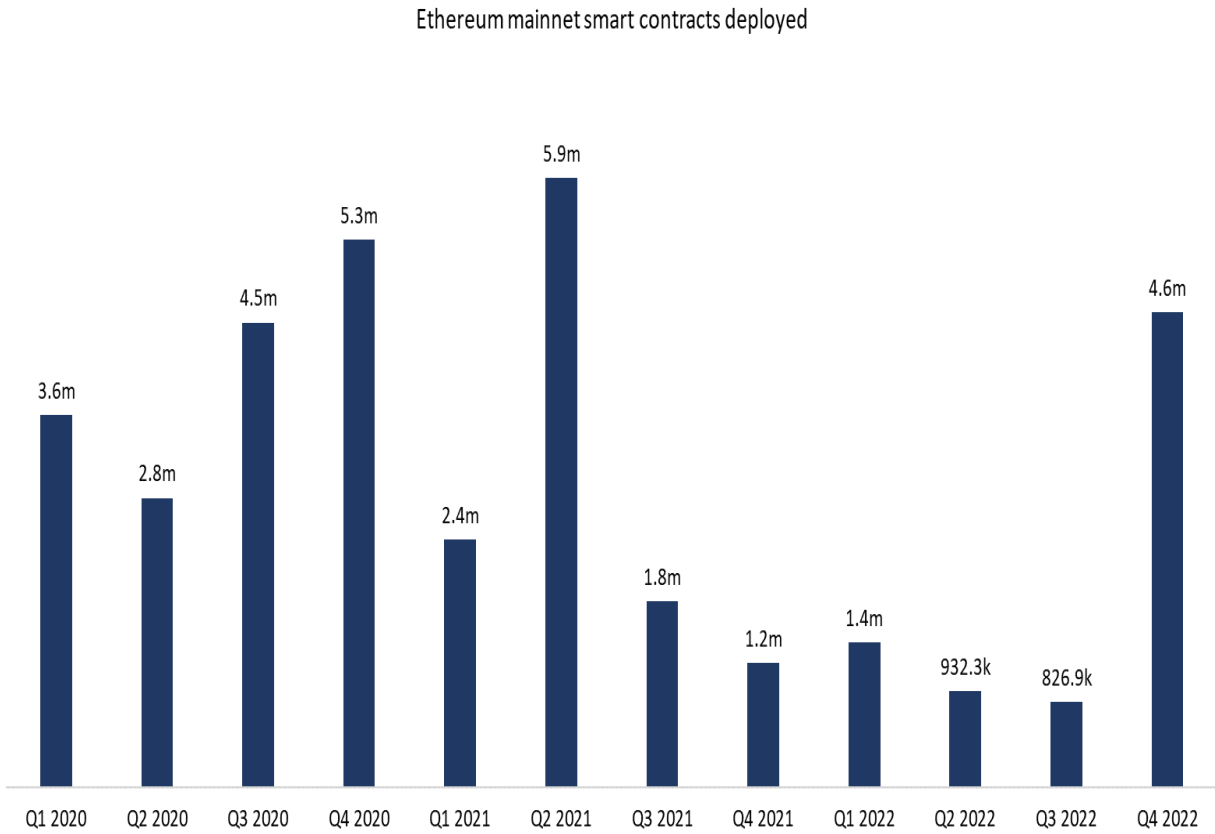
Users interacting/bridging between Ethereum and Layer 2s



Source: Alchemy, Dune Analytics.

4. ETHEREUM SMART CONTRACT DEPLOYMENT

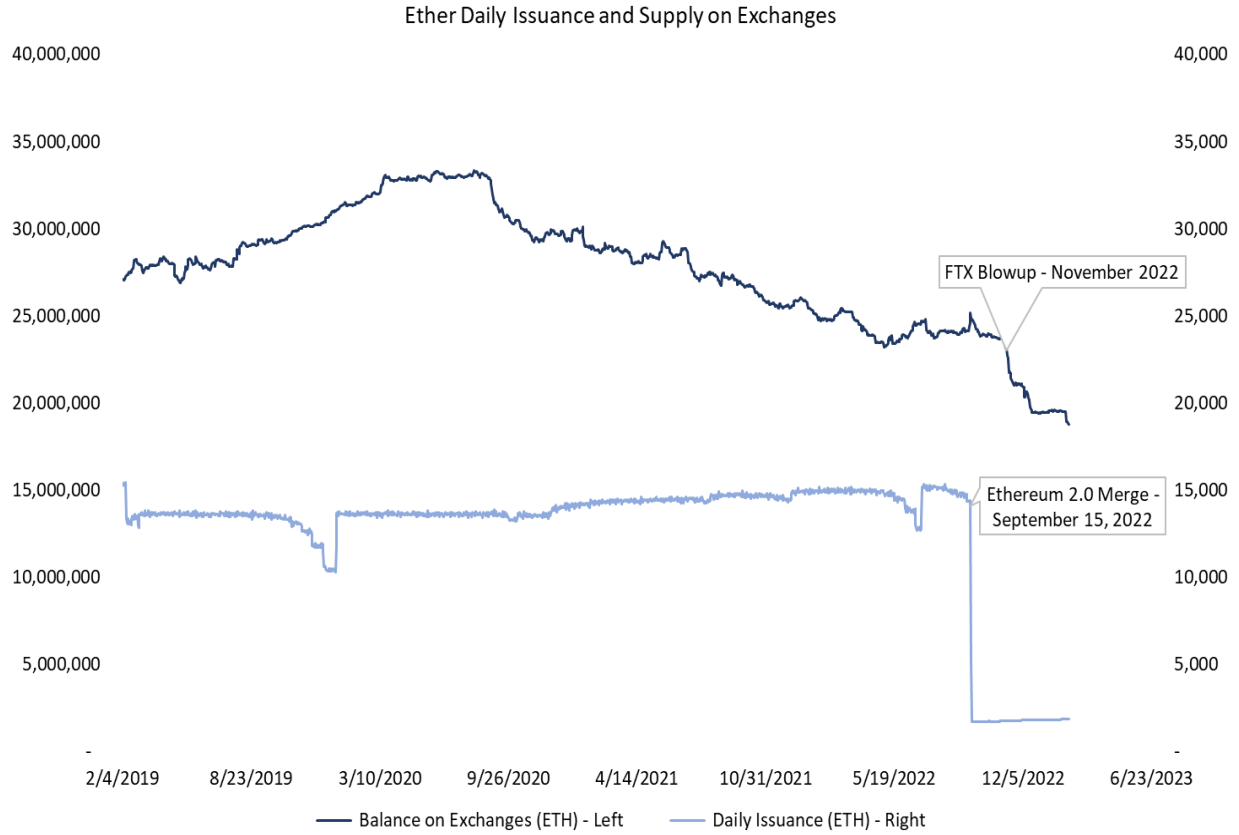
As the Ethereum ecosystem broadened, so did smart contract deployment across other layers of the ecosystem. Despite this, 2022 saw a 16% YoY growth in downloads of Ethereum development tools. Q4 2022 saw a resurgence in Ethereum mainnet smart contract deployment coinciding with the FTX saga.



Source: Alchemy. Dune Analytics. NPM Trends.

5. ETHEREUM SUPPLY DYNAMICS

The Ethereum merge saw a net reduction in annual ETH issuance of ~89%. The FTX saga sparked a notable outflow of Ethereum supply to cold storage wallets. These are only few factors that bode well for Ethereum's value as its demand continues to grow.



Source: Glassnode.

Metric Definitions

1. Volume – The aggregated value of native units transferred between addresses on-chain.

2. Transfer Count – The sum count of transfers between addresses. It becomes more valuable when used in conjunction with Volume.

2.1 Low Transfer Count & High Volume: High volume but transferred by a few addresses.

2.2 High Transfer Count & Lower Volume - Indicates higher retail activity or exchanges amongst small accounts.

2.3 Lower Transfer Count & Lower Volume: Indicates slower network usage and low network demand.

2.4 High Transfer Count & Higher Volume- indicates high network usage. A persistent trend is substantial.

3. Active Users: Number of addresses active in the network as recipients or originators of ledger change. This includes value transfers, signing blocks, and other forms of ledger change activity.

3.1 High Value: High network usage and high demand.

3.2 Low Value: Low network usage and low demand.

4. User Growth Rate: The rate at which new addresses with non-zero balances are added to the network.

4.1 High Value: Indicates users being added to the network at an increasing rate.

4.2 Low Value: Indicates users being added to the network at a slower pace.

5. Valuation: This metric compares the on-chain volume to the realized capitalization representing the value of the network. Realized capitalization is a revised form of market capitalization that accounts for the value of the coin at the time the coin was last spent. A lower volume compared to the high value of the network indicates the network could be overvalued and vice versa.

5.1 High Value: Indicates the network is closer to its real value based on the on-chain volume.

5.2 Low Value: Indicates the network is very close to being overvalued considering the activity on the network.

5.3 Medium value: Asset is reasonably valued—sustainable demand for transactions.

6. Velocity –This indicator shows the turnover of coins in the network as measured by on-chain volume divided by active supply. The primary use of this metric in this instance is to help assess an asset’s market-relevant supply.

6.1 High Value: There is greater circulation of coins in the network and use for payments.

6.2 Lower Value: There is lower circulation of coins in the network and use for payments.

7. Network distribution – The metric used, the SER ratio, compares the smallest accounts (sum held by accounts with a balance less than 0.00001% of the supply) against the richest accounts (sum held by the top 1% addresses).

7.1 High value: Signifies high distribution of supply and higher decentralization.

7.2 Low value: Low supply distribution and heavy concentration amongst a few wallets.

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