The Big Picture

Prices down, devs up.

Despite Ethereum decreasing 70% in price, developer activity increased by over 40%.

*As measured by verified smart contract deployments*
Q3’22 was the biggest for devs, ever

- 1.5m Ethereum SDK installs/week (+178% Y/Y)
- 17,375 smart contracts (verified) /month (+160% Y/Y)
- 12,495 dapps (12x since 2018)
This is despite the bear market

- **DEFI**
  - Total value locked Y/Y: -69%

- **NFTS**
  - Trading volume USD Y/Y: -88%

- **PRICES**
  - Ethereum price USD Y/Y: -56%
Approach
3 ways to measure developer activity

- Libraries: Developer tools to easily read/write to the blockchain
- Smart contracts: Computer programs stored on a blockchain
- dapps: End-user ready applications with decentralized backends

These 3 indicators show us if devs are building, deploying, and growing
Ethereum Libraries

Libraries are up and to the right
1.5m/weekly Ethereum SDK installs

Ethereum SDKs include Ethers.js and Web3.js, which developers need to build on the Ethereum blockchain.

- 2018: 145,799
- 2019: 180,231
- 2020: 325,056
- 2021: 552,272
- 2022: 1,536,548

+178% increase from 2018 to 2022.
Weekly downloads
Ethers.js, Web3.js, and Combined

<table>
<thead>
<tr>
<th>Year</th>
<th>Ethers.js</th>
<th>Web3.js</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>145,799</td>
<td>53,863</td>
<td>53,863</td>
</tr>
<tr>
<td>2019</td>
<td>180,231 (+24%)</td>
<td>66,959 (+24%)</td>
<td>66,959 (+24%)</td>
</tr>
<tr>
<td>2020</td>
<td>325,056 (+80%)</td>
<td>163,799 (+145%)</td>
<td>163,799 (+145%)</td>
</tr>
<tr>
<td>2021</td>
<td>552,272 (+70%)</td>
<td>247,999 (+54%)</td>
<td>247,999 (+54%)</td>
</tr>
<tr>
<td>2022</td>
<td>1,536,548 (+178%)</td>
<td>948,981 (+212%)</td>
<td>948,981 (+212%)</td>
</tr>
</tbody>
</table>

Total downloads:

- Ethers.js: 587,567 (+137%)
- Web3.js: 304,273 (+86%)
- Combined: 891,840 (+123%)

Chart showing growth from 2018 to 2022.
Smart Contracts

Smart contracts are up and to the right
Verified smart contract deployments are up more than 50% in 2022

Verified smart contracts were used for measurement of production applications. The number of total contracts deployed is more than 10X larger.
36% of all verified smart contracts were deployed just this year, making 2022 the biggest year ever.
Monthly verified smart contracts up 2.6x Y/Y

New monthly all time highs (ATHs) consistently set

- 7/22: 14,615
- 8/22: 16,698
- 9/22: 17,736
Smart contracts not tied to prices

Verified smart contract deployment

<table>
<thead>
<tr>
<th>Date</th>
<th>Deployment</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/1/22</td>
<td>12,337</td>
<td>$3,450</td>
</tr>
<tr>
<td>6/30/22</td>
<td>11,824</td>
<td>$1,035</td>
</tr>
<tr>
<td>9/30/22</td>
<td>17,736</td>
<td>$1,323</td>
</tr>
</tbody>
</table>
dapps

dapps are up and to the right
More than 12,000 dapps and growing

- 0x, Aave, Apex, Audius, Balancer, Coherent, CollabLand, Compound, Context, Curve, Dark Forest, Decentral Games, DeveloperDAO, dydx, Farcaster, Fractal, Gitcoin, Gods Unchained, Goldfinch, Helius, Hop, Hyperspace, Illuvium, JonesDAO, Lens, Magic Eden, Metamask, Mirror, OpenSea, Pancake Swap, Phantom, Royal, Quickswap, Quix, Safe, Showtime, Slingshot Finance, Snapshot, Solanart, Stargate Finance, Sudoswap, Sweat, Synapse, Syndicate, Synthetix, Tally, Uniswap, x2y2, Zapper, Zerion
335% growth in active developer teams YTD
804% growth in active developer teams Y/Y
153% growth in API consumption YTD
Arbitrum

516%
growth in active developer teams YTD

795%
growth in active developer teams Y/Y

121%
growth in API consumption YTD
Web3 Development Report

Optimism

>1000%
growth in active
developer teams YTD

>1000%
growth in active
developer teams Y/Y

>460%
growth in API
consumption YTD
Web3 Development Report

Solana

>1000% growth in active developer teams YTD

>1000% growth in active developer teams Y/Y

>500% growth in API consumption YTD
Additional Alchemy data

- **2x** Archive requests YTD
  - suggesting more developers are leveraging historical chain data

- **10x** Enhanced API requests YTD
  - confirming expansions from core node APIs to more advanced infrastructure across DeFi, DAOs, and gaming

- **10x** NFT API requests YTD
  - suggesting more use of NFTs in user-facing products and analytics

- **+16k** signups in <1 week
  - for Alchemy University, the new platform for learning how to build in web3
Data infrastructure is growing

- **Chainlink**
  - 500+ projects
  - 4.2B on-chain data points

- **The Graph**
  - 500+ subgraphs
  - 560B queries

- **Alchemy**
  - Billions of data requests YTD
  - suggesting developers are actively building dapps with diverse use cases
Social infrastructure is growing

- **ENS**: 545,948+ owners
- **Lens Protocol**: 86,500+ owners
- **Farcaster**: 164,000 casts by 3,405 all-time casters
Wallet and DeFi infrastructure is growing

- **WalletConnect**: 46,250 weekly installs, +13% Y/Y
- **RainbowKit**: 26,359 weekly installs, launched 2022
- **Uniswap v3 SDK**: 27,841 weekly installs, +280% Y/Y
Methodology
Methodology

This report strives to provide an accurate and useful representation of web3 development. The following sources were used for data collection purposes: Etherscan (verified smart contracts), DappRadar (dapp count), Github and NPM JS (SDK installations and metadata), CoinMarketCap (token prices), and the Internet Archive (fetching historical versions of aforementioned pages to provide timestamped data sources). web3 Javascript library weekly downloads were used as a proxy for developer activity here. This metric is helpful but imperfect due to the ability for the library to be downloaded multiple times by the same user intentionally or unintentionally. However, it provides one signal for directional guidance. Additionally, the growth of various blockchains on Alchemy is purely relative; certain chains are significantly larger as measured by active teams and daily requests.
Thank you to the report’s sources

Developer Activity: Alchemy

Smart Contracts and Programs: Etherscan and Solscan

Market and Prices: DappRadar, Defi Pulse, CoinMarketCap, Dune

SDKs: Github and NPM

Historical Web Pages: Internet Archive
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