

**Q2 2023**

# **Web3 Development Report**

# TL;DR

## The state of web3 development



# Q2 Executive Summary

- **Web3 Devs:** SDK installs and EVM smart contracts continued to climb, pointing to healthy developer activity
- **DeFi + NFTs:** Consumer DeFi and NFT trading volumes slumped, but the number of DeFi users is up 35% Q/Q
- **Three Transitions:** Security, account abstraction, and ZK-rollups gain traction following Vitalik's Three Transitions
- **Account Abstraction:** Active Account Abstraction users surge 27,360% as ERC-4337 gains traction
- **Testnets:** Sepolia will soon be the preferred developer testnet as Goerli supply dries up



# Web3 dev activity continued to climb

Y/Y and Q/Q comparisons highlight sustained growth in dev activity.

**26.8M**

**Ethereum SDK installs**

+37% Y/Y +7% Q/Q

**11.1M**

**Wallet SDK installs**

+196% Y/Y +22% Q/Q

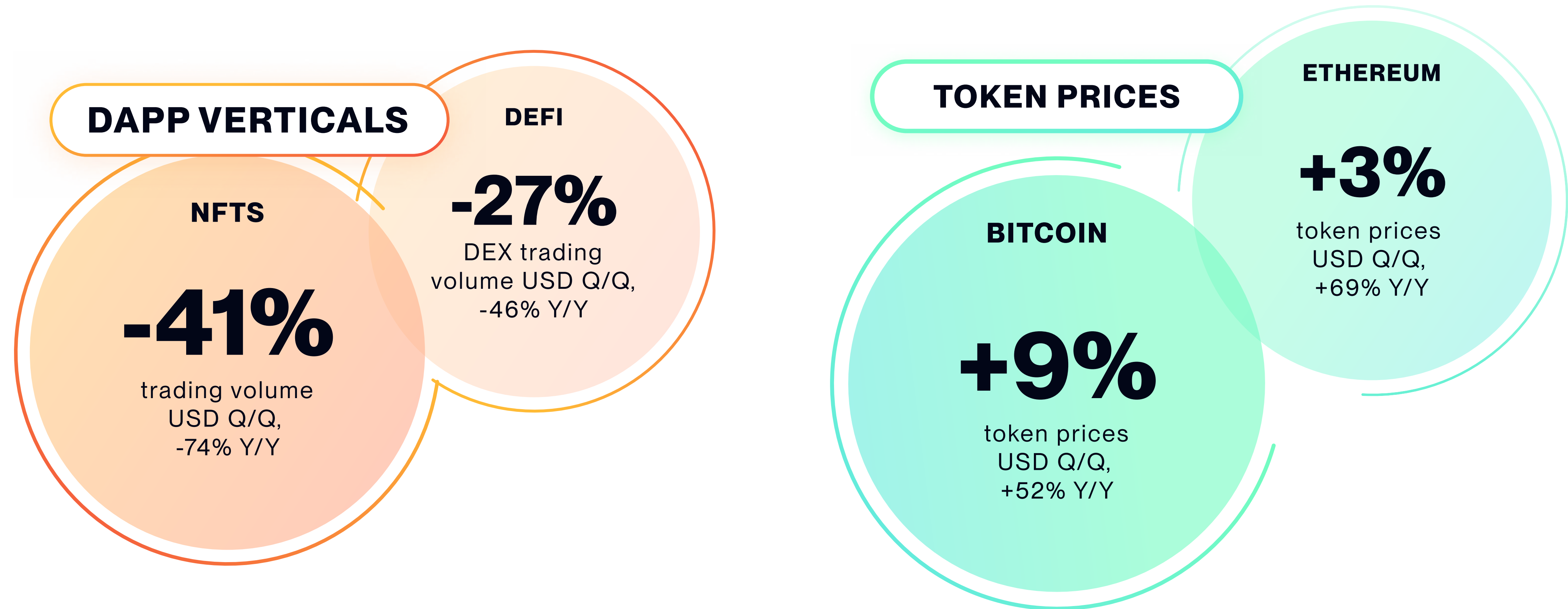
**75.9M**

**EVM Smart Contracts created  
across Ethereum Mainnet,  
Arbitrum, Optimism and Polygon**

+1,106% Y/Y +302% Q/Q



# Trading volume dips, but token prices improve





# Our approach

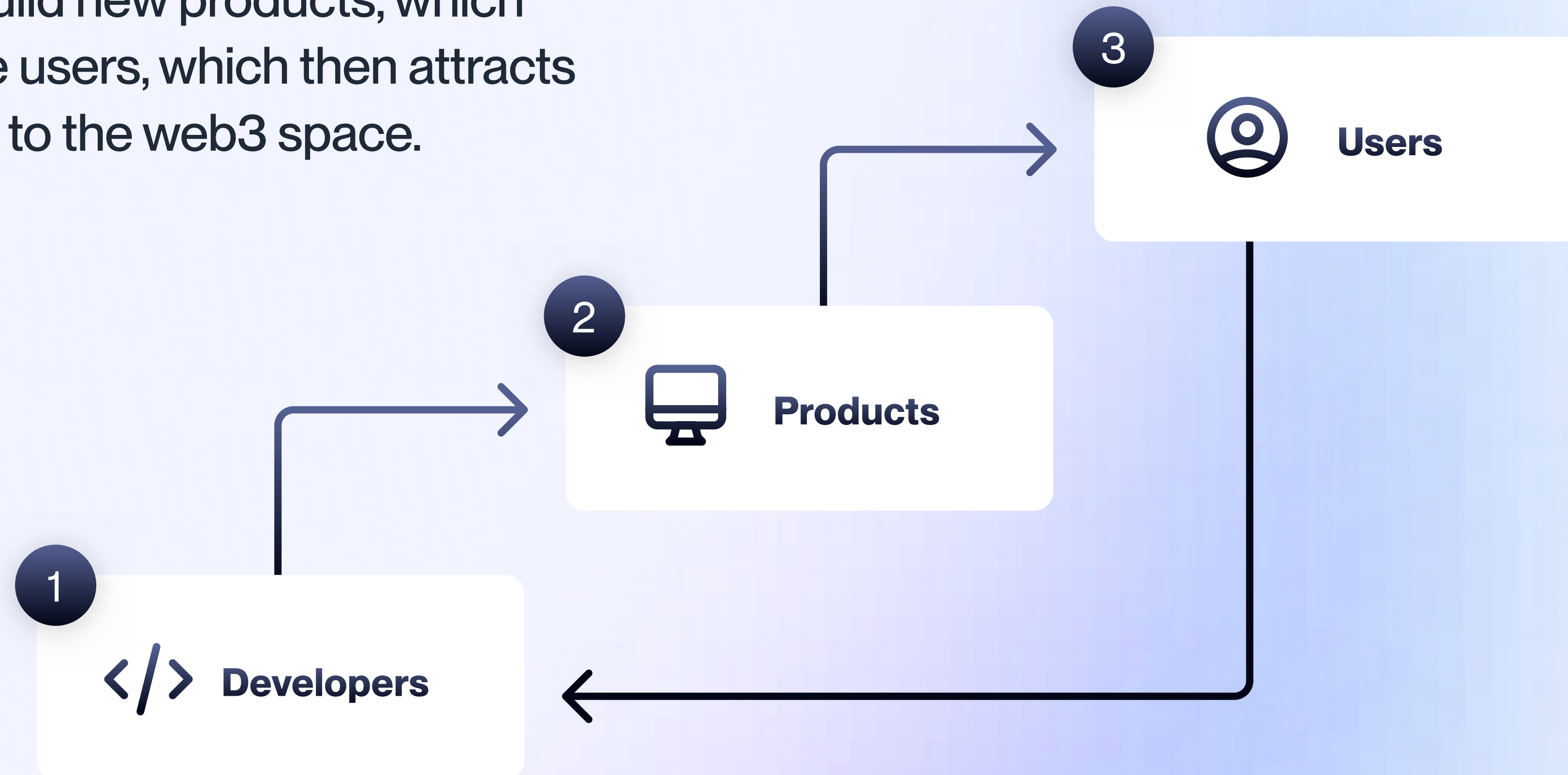
Understanding the builder ecosystem





# The development cycle

Developers build new products, which onboard more users, which then attracts more builders to the web3 space.





# 5 stages of developer activity

DEVELOPMENT STAGE	1. IDEATION & INTEREST	2. LOCAL TESTING	3. TESTNET DEPLOY	4. MAINNET DEPLOY	5. SCALING DAPP USAGE
<b>Action</b>	Developer becomes interested in web3 and forms an idea of what to build	Developer installs libraries for web3 application building and local deployment	Developer connects to a testnet, gets test ETH from a faucet, and deploys their smart contracts	Developer connects to mainnet blockchain, places Ethereum in wallet and deploys to Mainnet	Developer maintains, improves and scales existing codebase for growth
<b>Measurement</b>	Alchemy Dapp Store, Alchemy Ventures,	Library downloads	<a href="https://sepoliafaucet.com">sepoliafaucet.com</a> , <a href="https://goerlifaucet.com">goerlifaucet.com</a> , testnet contracts	Mainnet Contracts, EVM Contracts, L2 Bridging	Alchemy API Usage, Ecosystem Usage



# Measuring builder momentum

These 3 indicators show us how devs are **building, deploying, and scaling**

## 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



# 1 Ideation and interest

2 Local development

3 Testnet deploy

4 Mainnet dev activity

5 Scaling usage

6 Trends & insights

Positive developer sentiment and fundraising across fast-growing verticals point to continued interest in building web3 products.





# Startups focused on security and scaling

Q2 vertical segmentation for Alchemy Ventures focused on security, scaling, and infrastructure improvements.



Founders focused on

20%

Security

30%

Infrastructure

20%

Transaction Infra

10%

Layer 3 Technology

10%

ZK Tech

10%

Decentralized Identity



# Data driven dapps got a boost 🚀

# 2,000+

web3 solutions and counting  
now on Alchemy Dapp Store:

# +20%

since end of Q1

# 331

new dapps approved in Q2

## Fastest growing categories

- Blockchain auditing
- Web3 data companies

# +21% Q/Q

token terminal



arbitrary.  
execution





# Alchemy Q2 Developer Survey

- In Q2 2023, Alchemy surveyed web3 developers to gather insights into platform usage and market outlook.
- In total, 625 respondents provided feedback and insights on their interests and main blockers for growth.



## Alchemy Q2 Developer Survey

**“What topic in web3 are you most interested in?”**

People were more interested in security and scalability than general tech trends like AI.

1. Smart contract security
2. Account abstraction
3. ZK-rollups
4. Smart contract development
5. AI

## Alchemy Q2 Developer Survey

**“What are the top obstacles to growth in the next year?”**

People viewed funding as a bigger barrier to growth than regulation.

1. Funding
2. Awareness
3. Regulation
4. Resource Bandwidth



# Web3 use cases in action

## Fashion



Nike launched Our Force 1, an NFT experience that digitizes the option to buy a shoe as an NFT until it is redeemed for a physical shoe.

## Social



Lens Protocol, the decentralized social media app, launched Momoka, its Optimistic L3 scaling solution that will process transactions at hyperscale.

## Gaming



Google Play now allows developers to integrate blockchain-based experiences including NFTs and the use of tokenized assets within its apps and games.

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Before launching projects on testnets or mainnet blockchains, devs build on their personal computers (i.e. locally) to test and iterate before shipping.



# Total Ethereum SDK installs **kept climbing**

Ethereum SDKs include ethers, web3, hardhat, truffle, foundry, eth, alchemy-sdk, viem, userops, and wagmi.

## Q2 QUARTERLY SDK INSTALLS BY YEAR

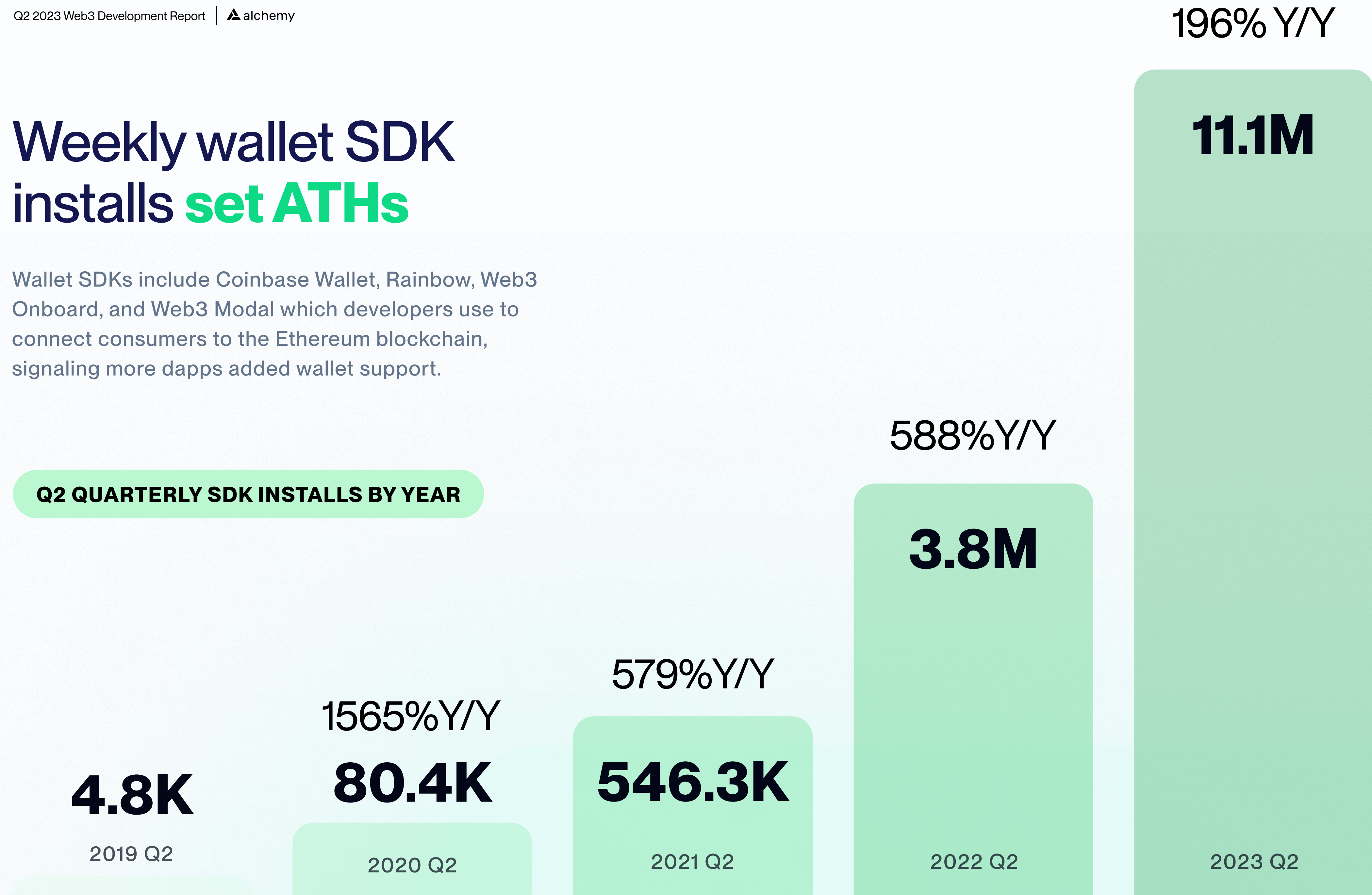




# Weekly wallet SDK installs **set ATHs**

Wallet SDKs include Coinbase Wallet, Rainbow, Web3 Onboard, and Web3 Modal which developers use to connect consumers to the Ethereum blockchain, signaling more dapps added wallet support.

## Q2 QUARTERLY SDK INSTALLS BY YEAR





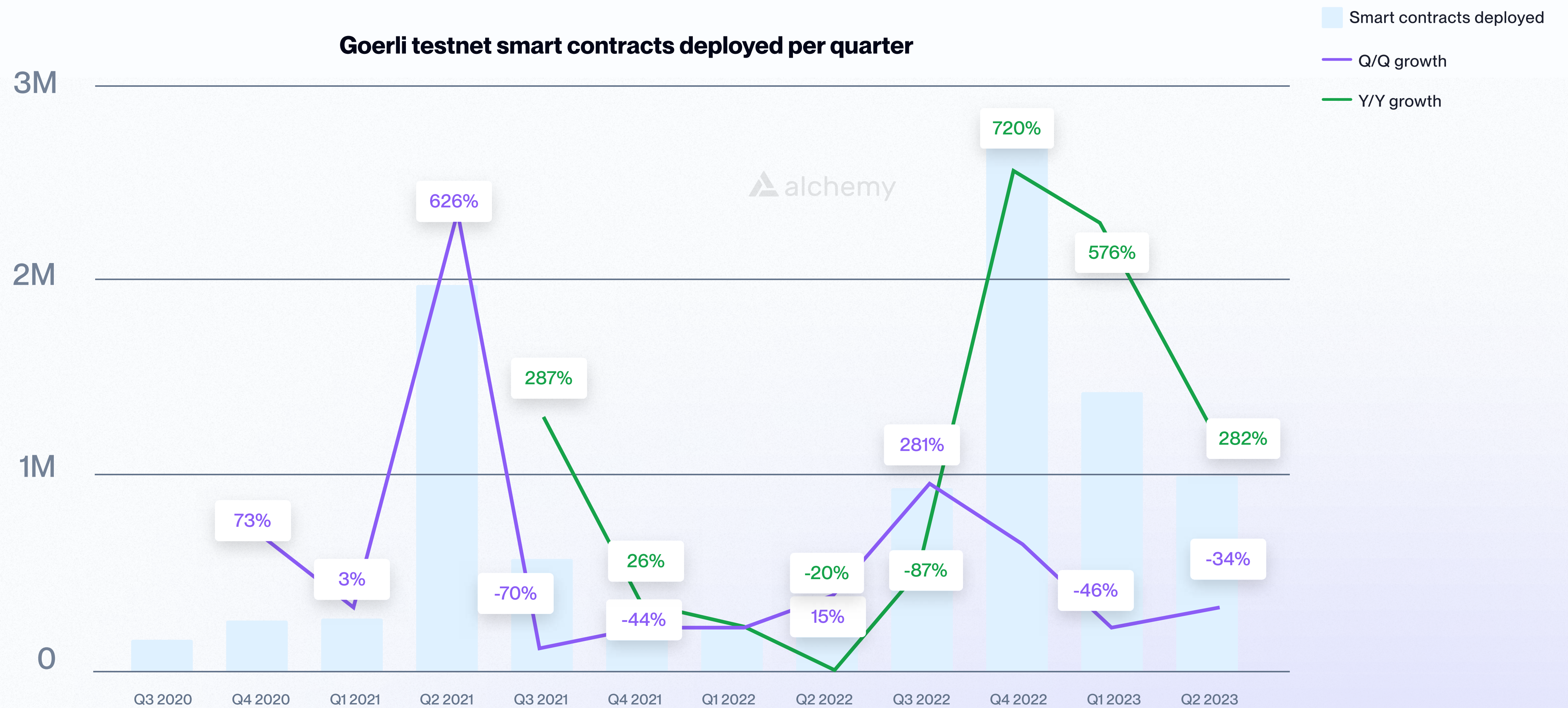
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Developers deploy applications to testnets to refine their product on a blockchain that mirrors the mainnet environment without spending real ETH.



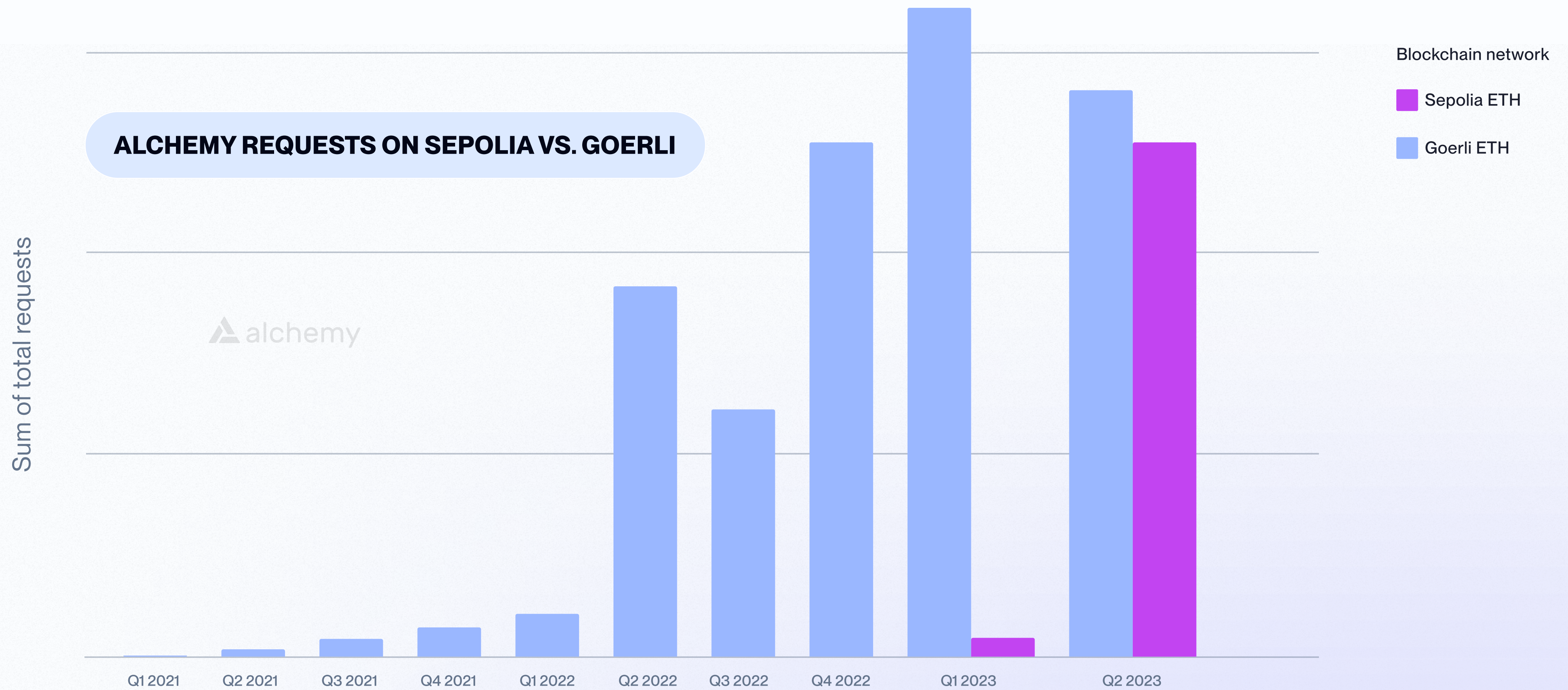
# Goerli contracts dip as devs migrate to Sepolia

The emergence of Goerli ETH secondary markets in Q1 created a scarce supply, resulting in fewer Goerli contracts created in Q2.





# Sepolia flipping is approaching 🏆



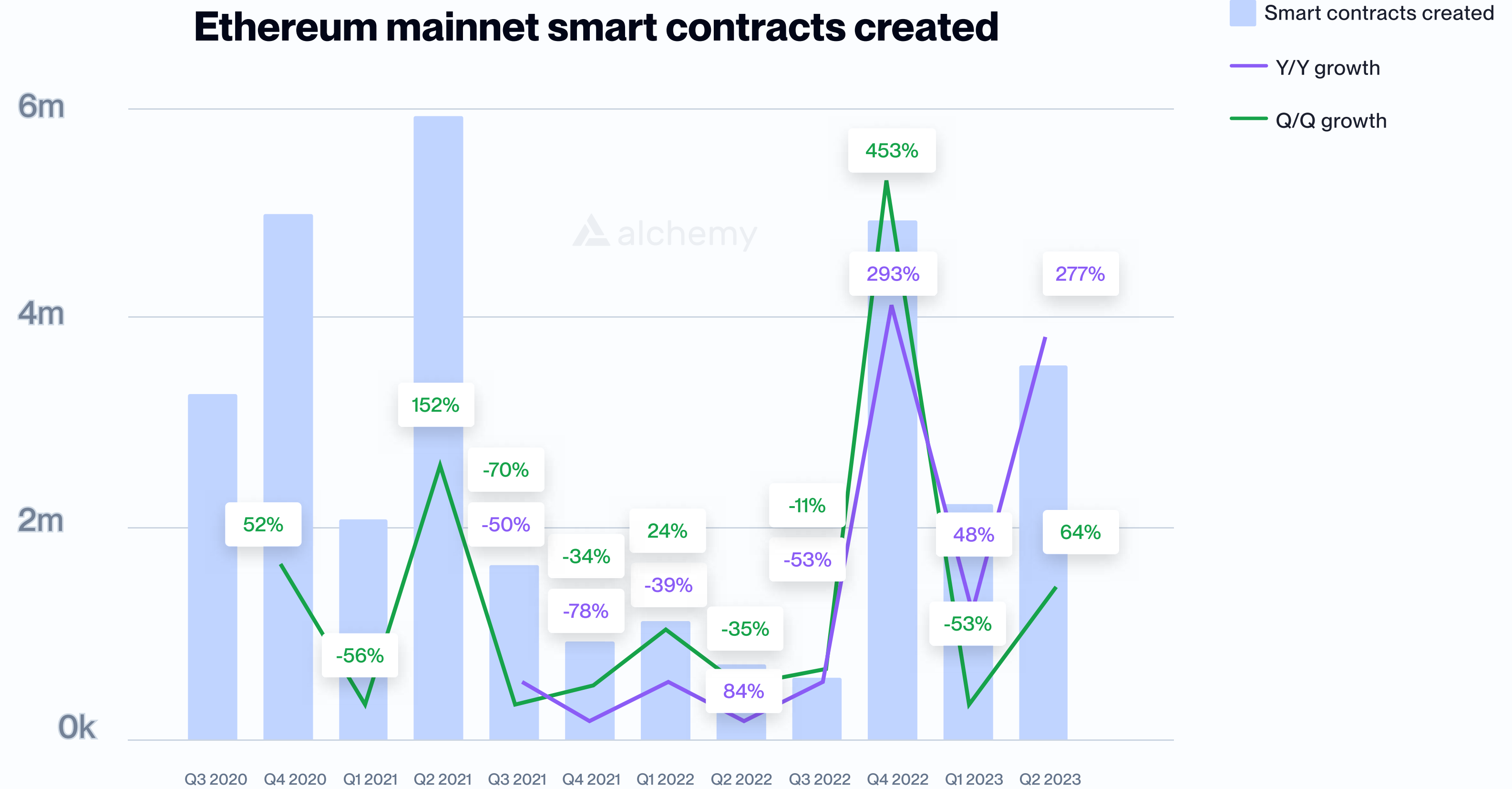


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Developers deploy tested applications to the Ethereum Mainnet and Layer 2s when their product is ready to serve real users in a live environment.



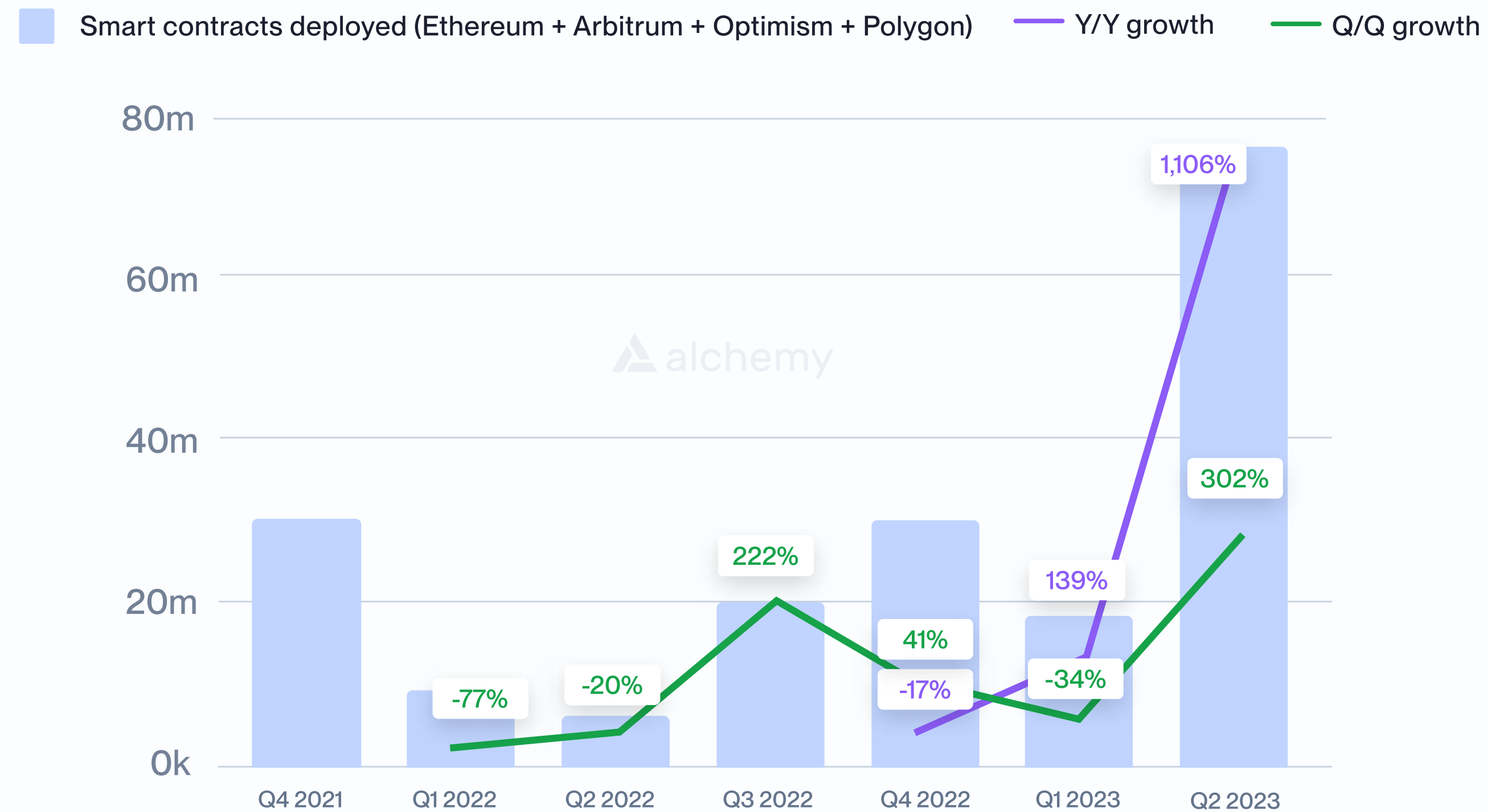
# Ethereum smart contract deploys grew Y/Y and Q/Q



# EVM (Mainnet + Layer 2's) contracts grew 1,106% Y/Y

With gas remaining affordable on Polygon, whale contract creators deployed +54M smart contracts created in Q2 alone.

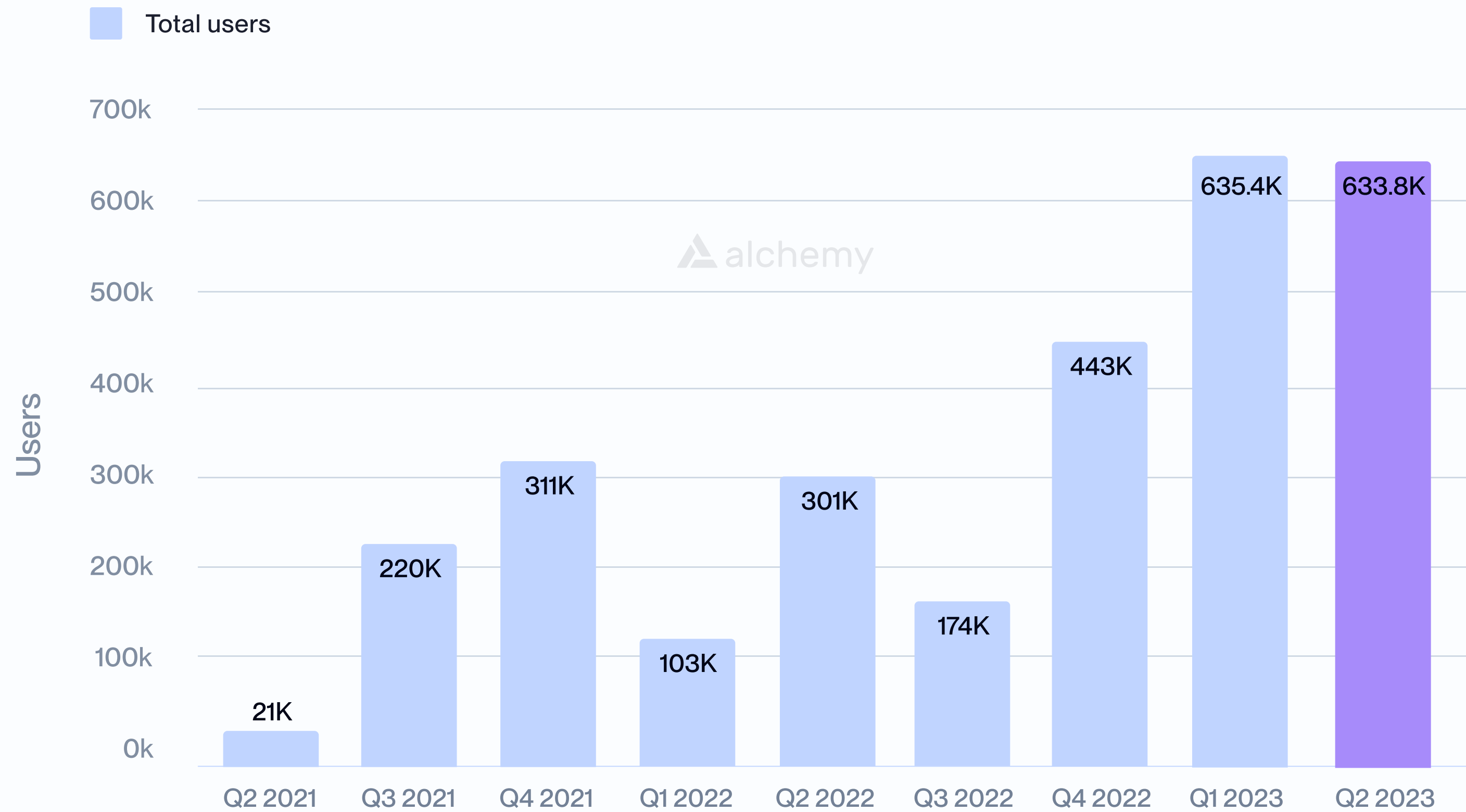
## Smart contracts deployed (Ethereum + Polygon + Optimism + Arbitrum)





# L2 bridging stayed steady Q/Q

Despite lower DEX and NFT trading volumes as a whole, bridging from Ethereum Mainnet to L2s remained steady Q/Q.



\*Total Users includes unique bridge users from Starknet, Polygon, Arbitrum, Optimism, and zkSync



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As web3 products attract real users and find product-market fit, developers need to scale their systems to support the increased consumer demand.





# Polygon activity on Alchemy pops

Total requests

**+33% Y/Y**

Free requests

**+70% Y/Y**

Enhanced API requests

**+535% Y/Y**

Active teams

**+74% Y/Y**

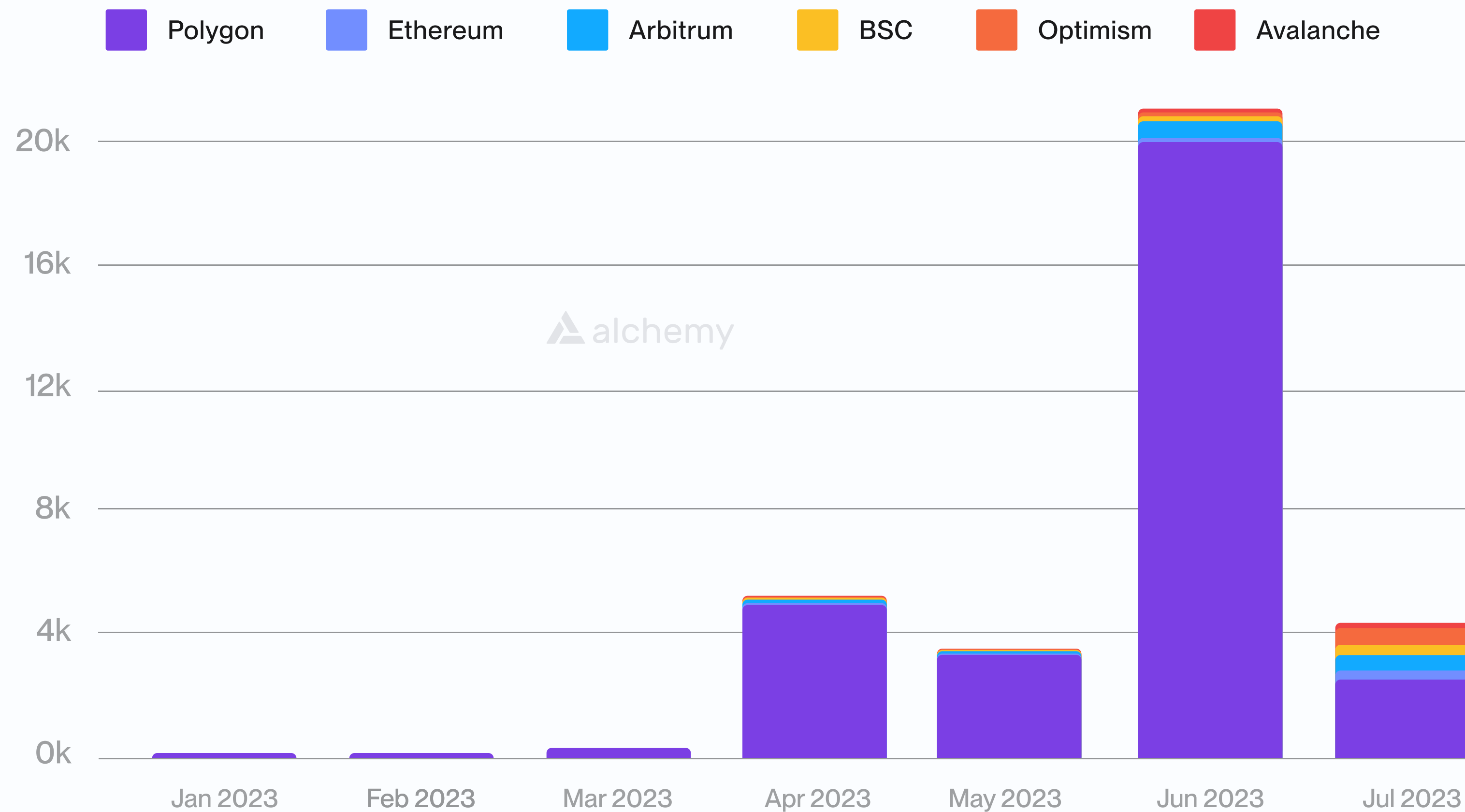
Free teams

**+73% Y/Y**



# Account abstraction is gaining momentum on Polygon

541% increase in monthly active ERC-4337 Smart Contract Accounts





# Arbinauts arrived en masse on Alchemy

Total requests

**+295% Y/Y**

Free requests

**+485% Y/Y**

Enhanced API requests

**+7,589% Y/Y**

Active teams

**+213% Y/Y**

Free teams

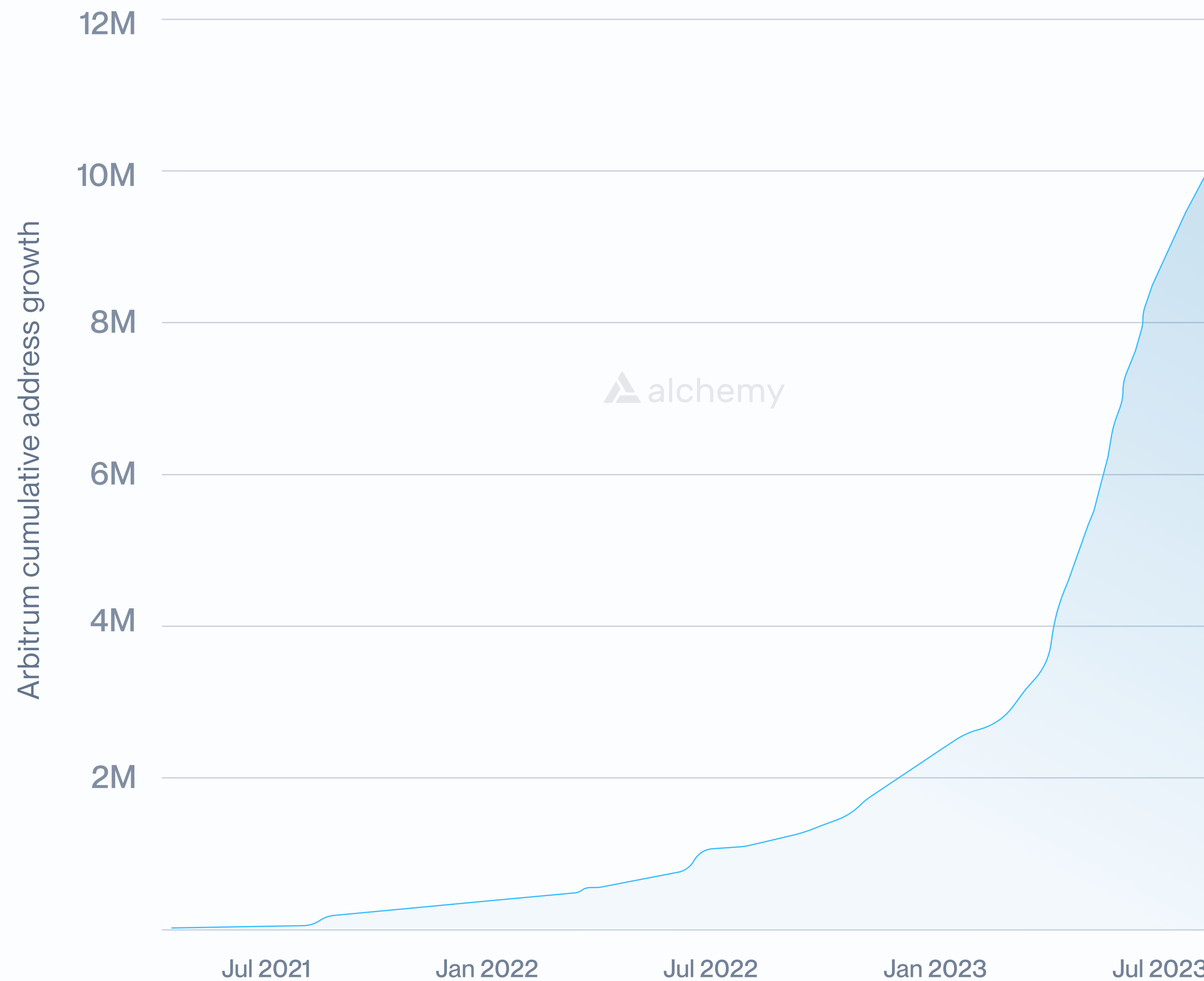
**+216% Y/Y**



# Arbitrum's Layer 2 boomed

Arbitrum One, an optimistic rollup, hit 9.5M unique addresses and more than doubled in Q2.

### Arbitrum unique addresses





**OPTIMISM**

# Optimism builders skyrocketed on Alchemy

Total requests

**+110% Y/Y**

Free requests

**+637% Y/Y**

Enhanced API requests

**+4,983% Y/Y**

Active teams

**+205% Y/Y**

Free teams

**+212% Y/Y**

## **OPTIMISM**

# And big upgrades ensured a bright future ahead

The Bedrock upgrade enabled Optimism network to have lower fees, reduced deposit times, and improved node performance.

**55%**

gas savings  
per transaction

**\$0.15**

average gas fee  
post-bedrock

**\$1.75M**

saved in fees in  
first 30 days





# Solana devs on Alchemy soared to new heights

Total requests

**+164%**

Q2 2023 / Q3 2022

Free requests

**+197%**

Q2 2023 / Q3 2022

Active teams

**+56%**

Q2 2023 / Q3 2022

Free teams

**+59%**

Q2 2023 / Q3 2022



# Astar gets a jumpstart on Alchemy

Total requests

**+7%**

Q2 2023 / Q3 2022

Active teams

**+175%**

Q2 2023 / Q3 2022

Free teams

**+114%**

Q2 2023 / Q3 2022





# And hit some major milestones

**500K**

Astar holders 🎉

**20K**

stakers 💰

+

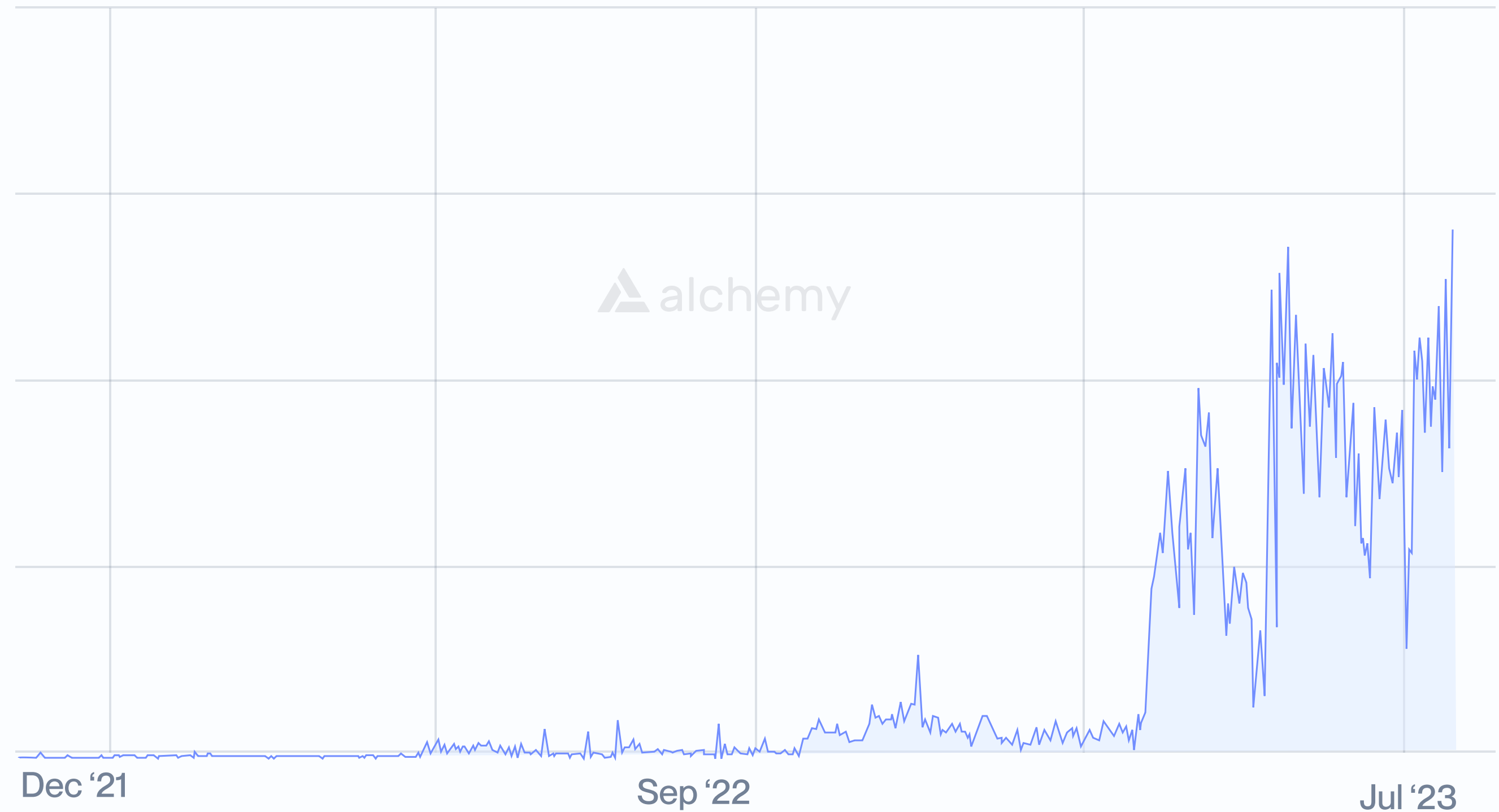


launched  
**Smart Contracts 2.0**



# Starknet secured huge network gains

Starknet saw **10x growth in Transactions Per Second (TPS)** with their focus on boosting performance to new heights and delivering a seamless UX to attract developers.

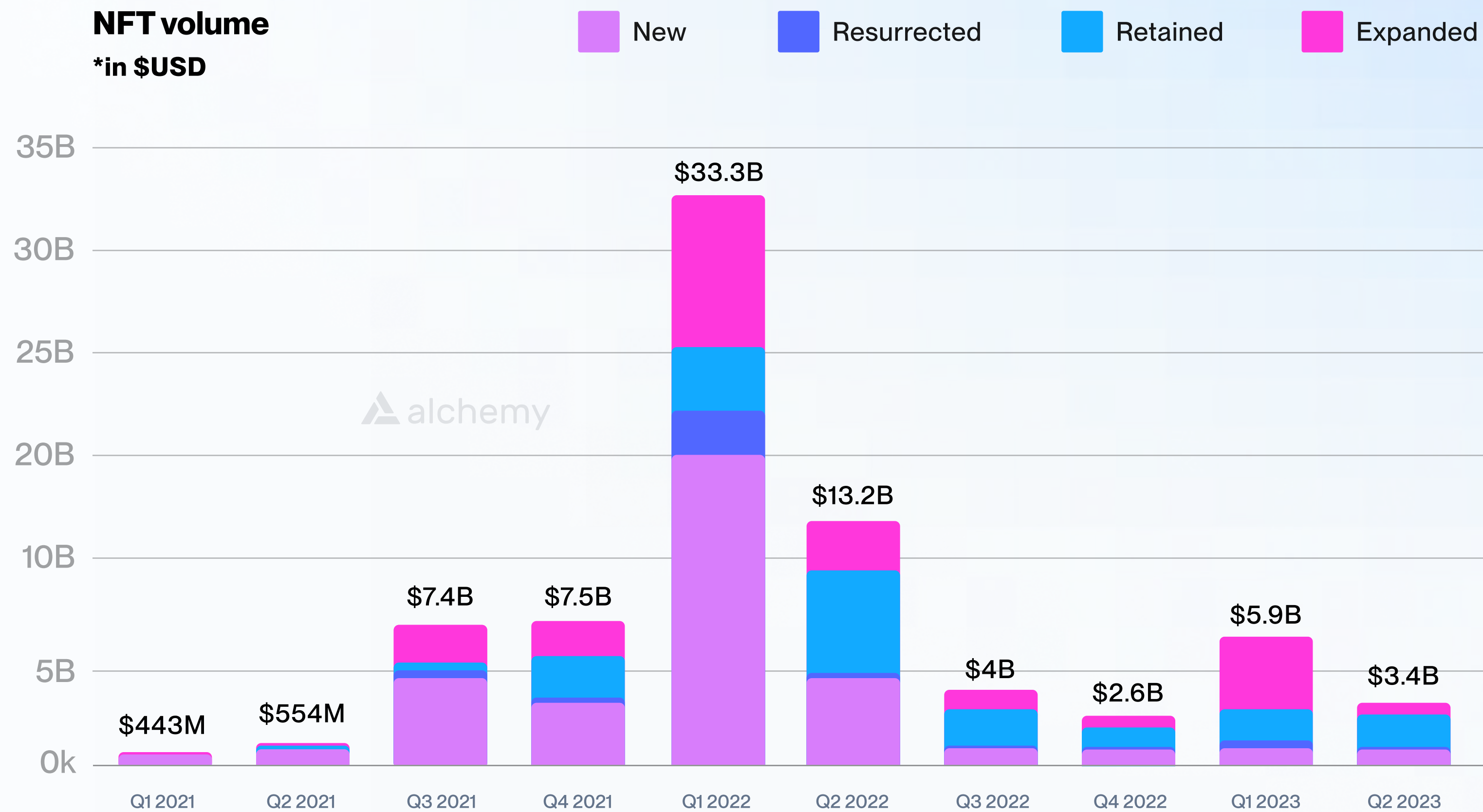




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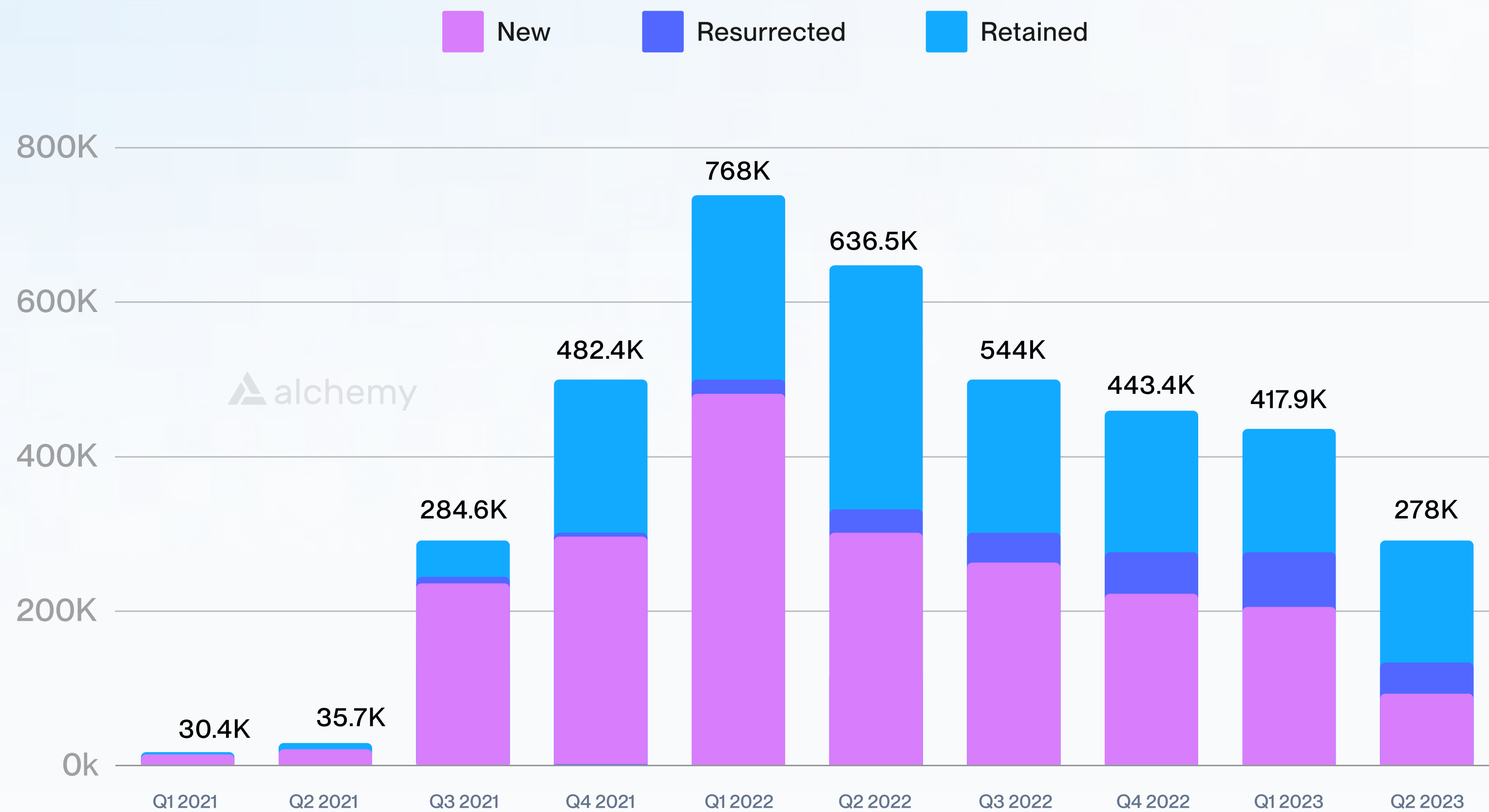
From dips in NFT trading activity to encouraging growth in DeFi users, here are a few other trends we found interesting in Q2.

# NFT volume down -42% Q/Q

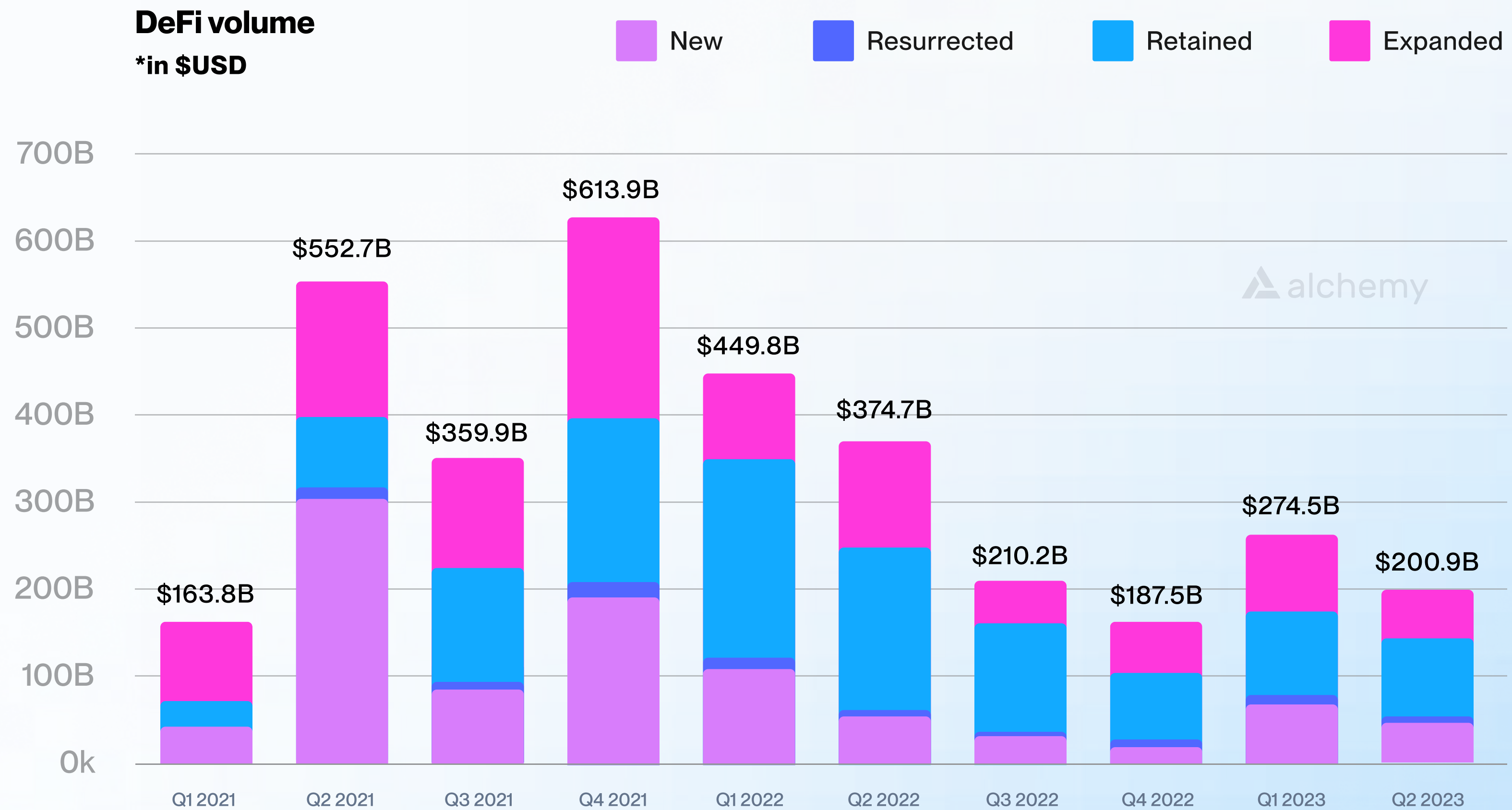




# NFT users down -33% Q/Q

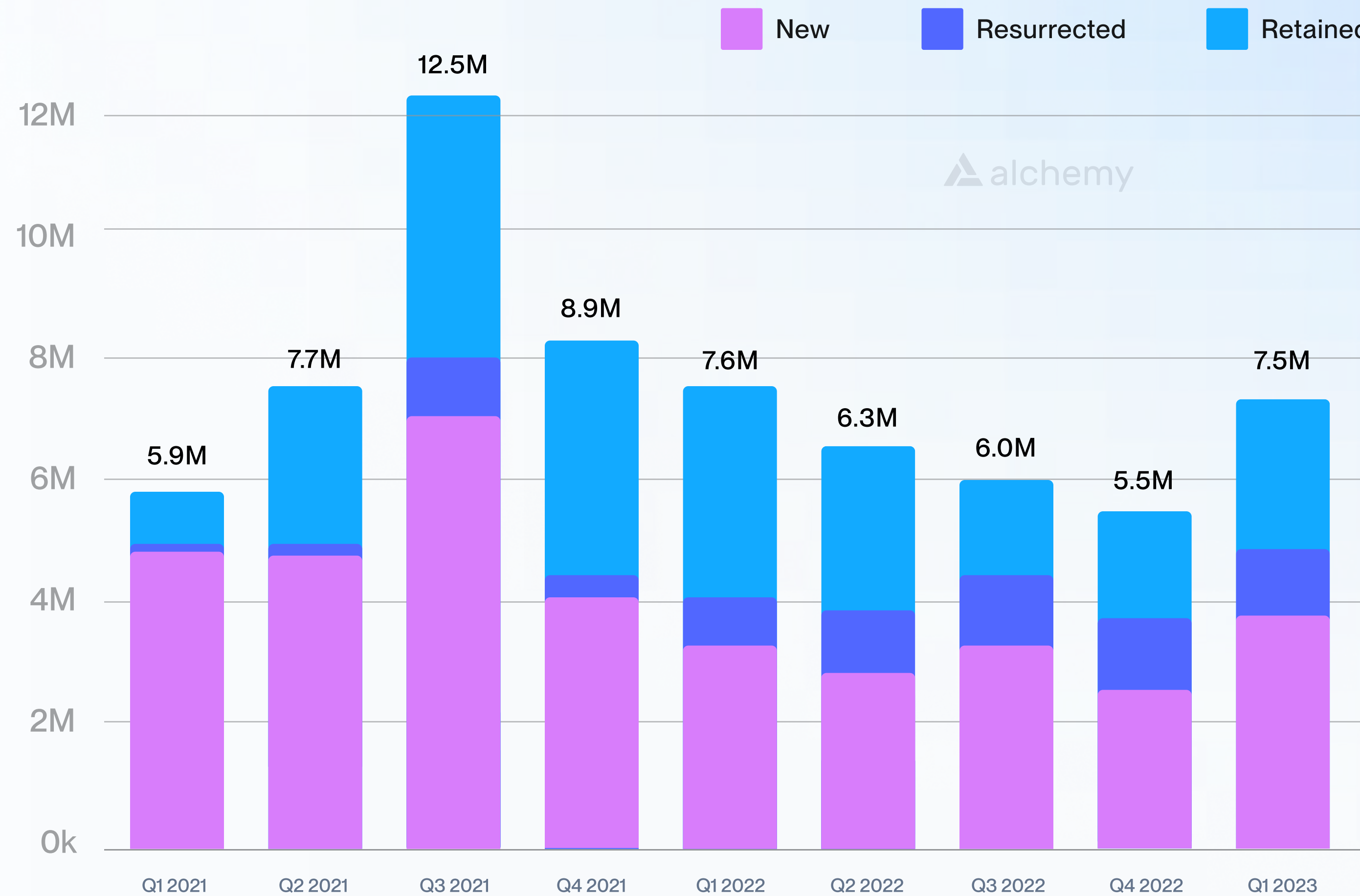


# DeFi volume down -27% Q/Q



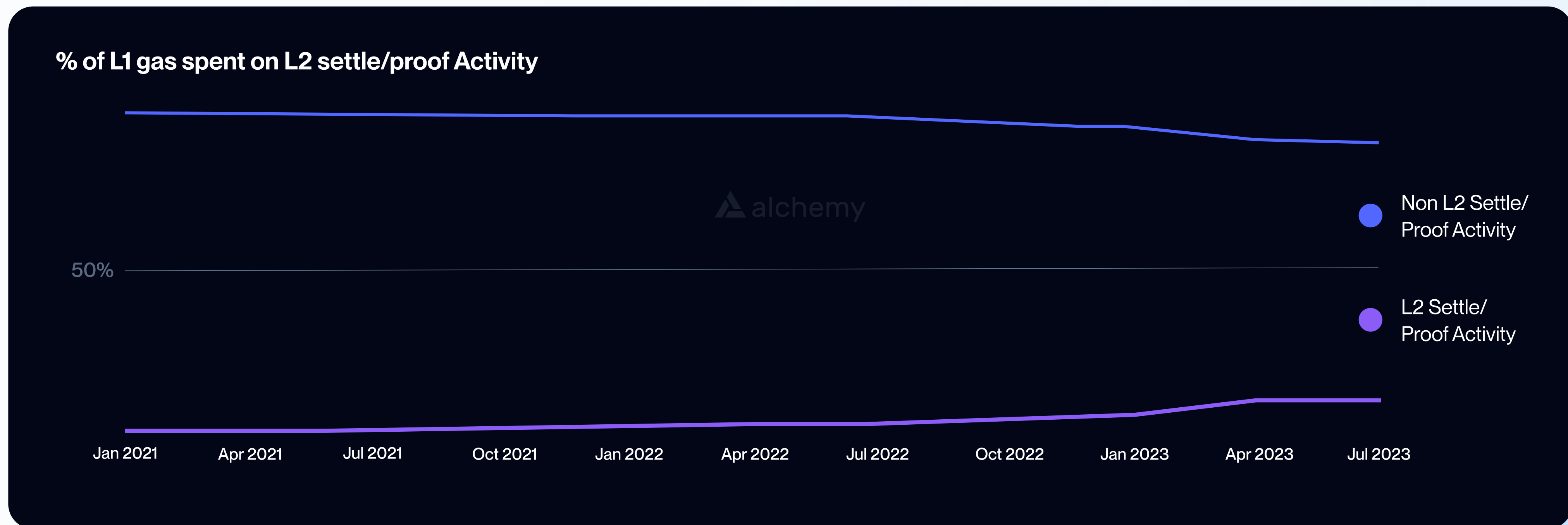


# DeFi users up +35% Q/Q



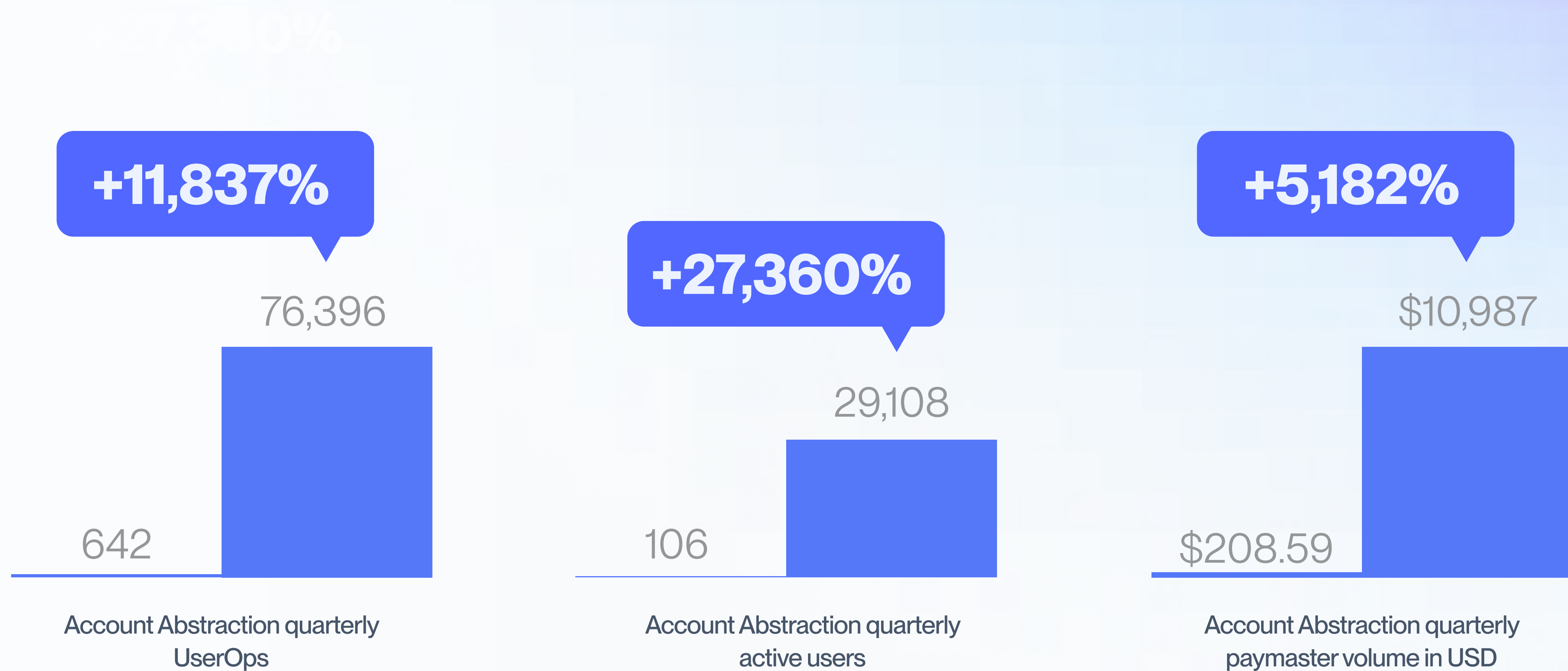
# In Q2 2023, 9% of L1 gas usage was L2 related

L1 gas usage related to L2s grew 85% Q/Q and 383% Y/Y





# ERC-4337 takes off 🚀



# Methodology





# Our aim

This report aims to provide an accurate and useful representation of web3 development. The following sources were used for data collection purposes: Alchemy's data, Dune (verified smart contracts), [npmjs.com](https://npmjs.com) (SDK installations and metadata), and Coingecko (token prices).



# Thanks to our sources

Smart Contracts, Bridging, and Programs:  
Dune. Special thanks to [OxKOfi](#).

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

SDKs: [npmjs.com](#)

For developer tools, resources  
and support, head to:

[alchemy.com](https://alchemy.com)

For more web3 alpha and  
analysis, join our community:

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