

Building Ecosystem Health Metrics

With Open Data Sources

Michael Silberling & Chuxin Huang

Data @ OP Labs PBC

Intros



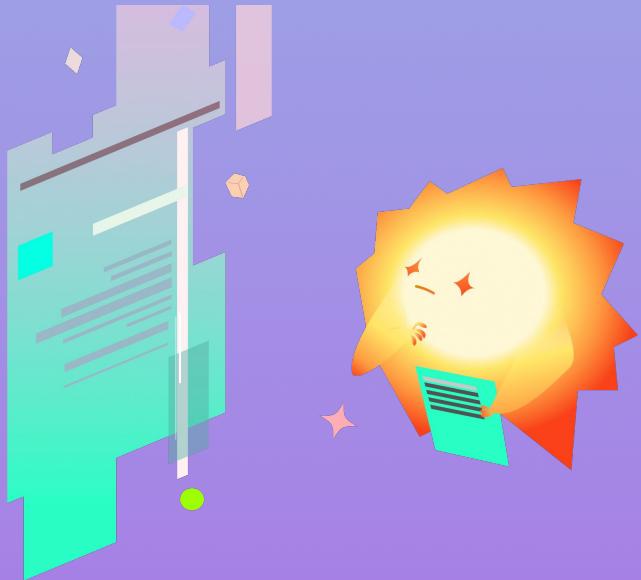
Michael @MSilb7



Chuxin @chuxin_h



Agenda



-
- 01 **What is Ecosystem Health**
-
- 02 **What We Built - Metrics Teardown**
-
- 03 **Let's Build (Workshop Time)**
-
- 04 **The Collective Data Vision**
-
- 05 **Q & A**
-



The Multichain Universe and Some Trivia

- **How many chains are there? (per Defillama)**
 - 322 ([DeFillama](#))
- **How many Rollups? (per Defillama & L2Beat)**
 - 38 ([DeFillama](#)) or 48 ([L2Beat](#))
- **How many chains are part of the Superchain Ecosystem?**
 - 21 with public mainnet launched ([Superchain Ecosystem Members](#))

*Source: Defillama and L2Beat, as of Oct 31, 2024.



Section 1

What is Ecosystem Health

Are we doing well?

This is a hard question!

1. It's hard to keep up

2. Gap between:

What you **think** you're measuring
vs
What you're **actually** measuring



**3. There are many views of
what “doing well” means**



User Engagement & Adoption

Metrics: Transactions, Gas Used, Users*

Good Outcome: Scale & reduce fees to support demand

Bad Outcome: Programs to artificially inflate activity

***We don't know what a user is!**



Developer Activity & Mindshare

Metrics: Contract Deployments, Github Contributors

Good Outcome: Build useful developer tools

Bad Outcome: Encourage low-quality quick deployments



Economic Activity

Metrics: Total Value Locked (TVL), volumes

Good Outcome: Address real world financial opportunities

Bad Outcome: Pay for short-term liquidity with low retention



Financial Performance

Metrics: App Fees, Transaction Fees, Net Onchain Profit

Good Outcome: Focus on things people are willing to pay for

Bad Outcome: Keep fees high, potentially leading to churn



Theme

Each indicator represents something useful

But, optimizing for one can lead to short-term decisions

So, what do we do?

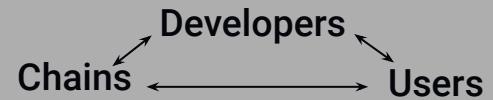
Ecosystem Health Metrics Framework

Key Actions + Drivers
Metrics around specific initiatives and strategies that drive the growth of chains, developers, and wallets.

Network Effects
The more participants, that is, chains, developers, and wallets, the more valuable the network.

Core Action
Onchain usage or blockspace demand.

Long-Term Sustainability
Values accrued to the ecosystem that makes it self-sustainable in the long run.



Onchain Usage

Revenue



Before we share more....
Questions, Comments?



Section 2

What We Built – Superchain Ecosystem Health Dashboard



Superchain Health Scorecard

data@oplabs.co

oplabs.co | optimism.io

See the latest list of [Superchain Members](#)

Superchain Marketshare - As of: Oct 31, 2024

Superchain % of L2 Txns

43.2%

As of: Oct 31, 2024
vs Target - -%
Last Month (MoM) 36.6% +6.63pp

Superchain % of Major Crypto Txns*

6.8%

As of: Oct 31, 2024
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Last Month (MoM) 5.8% +0.96pp
23 / 69 L2s / 101 Total Chains

Superchain's % of Transactions (L2s, Crypto)



Optimism Collective Revenue - As of: Oct 31, 2024

All Time Collective Revenue (ETH)

15.8K

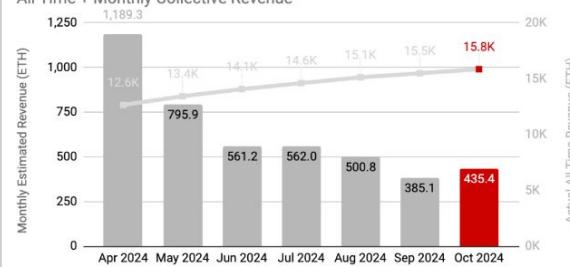
As of: Oct 31, 2024

See [Collective Contribution Detail](#)

435.4

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vs Pacing Target
Pacing (MoM) 385.1 +13.1%

All Time + Monthly Collective Revenue



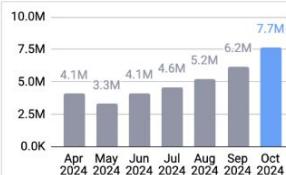
Superchain - Network Usage

Daily L2 Transactions

7.7M

As of: Oct 31, 2024
Last Month (MoM) 6.2M +24.4%
% of L2s 43.2% +6.63pp

26 / 95 chains

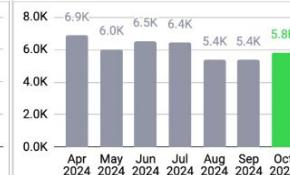


RevDevs (Developers)

5,800

As of: Oct 31, 2024
Last Month (MoM) 5,362 +8.2%
% of L7s & L2s 8.7% +0.36pp

3 / 11 chains



Value Onchain

\$3.6B

As of: Oct 31, 2024
Last Month (MoM) \$3.4B +8.7%
% of L2s 40.2% +3.86pp
% of Crypto 4.0% +0.20pp

15 / 50 L2s / 287 Total Chains

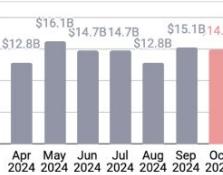


L2 Total Assets Onchain

\$14.9B

As of: Oct 31, 2024
Last Month (MoM) \$15.1B -1.6%
% of L2s 40.7% +1.48pp

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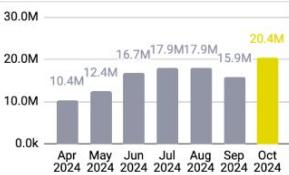


Infrastructure

L2 Gas Used per Second

20.4M

As of: Oct 31, 2024
Last Month (MoM) 15.9M +28.3%

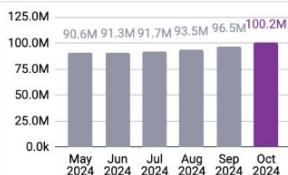


Governance

Voteable OP Supply

100.2M

As of: Oct 31, 2024
Last Month (MoM) 96.5M +3.9%

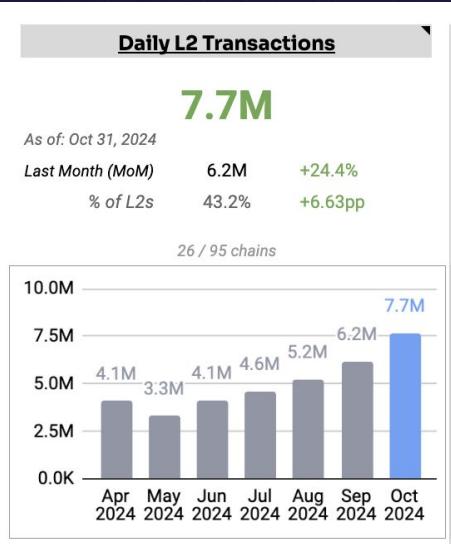


*Source: [Superchain Health Dashboard](#)

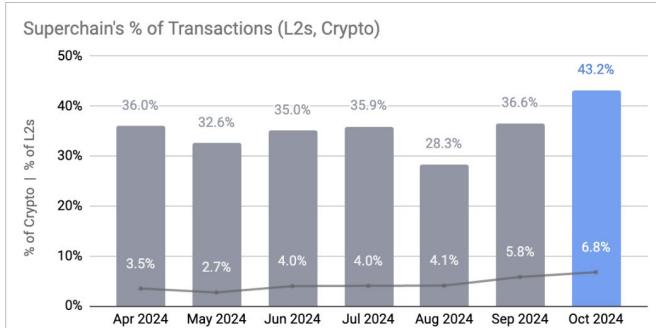


Note: Some metrics may cover different sets of chains due to varying data sources
See [Chain List](#), by [metric](#) and [grouping](#)

See [op-analytics GitHub](#) for the scripts and queries (WIP)



Superchain Marketshare - As of: Oct 31, 2024



*Source: [Superchain Health Dashboard](#)

Metric 1: Transactions

- Transactions can be **influenced by every participant in the ecosystem**, and every chain has a concept of transaction
- The market share number **normalizes the metric against market conditions**.
 - Define your market (chain? vertical?)
 - “Are we growing faster or growing with the overall market?”



“What are the drivers of transaction growth?”

Superchain: App / Contract Growth

Published 6 min ago by Michael Silberberg

Onchain data sourced from Goldsky, contract labels sourced from Growthepie and Opensource Observer

Attribution is made by taking the “to address” of each transaction.

| Snapshot Date | Current Period - Num of Days | Prior Period - Num of Days | | | | |
|---|--|--|------------------------|---------------|----------------|-------|
| <input type="button" value="Today"/> <input type="button" value="X"/> | 7 <input type="button" value="^"/> <input type="button" value="▼"/> | 7 <input type="button" value="^"/> <input type="button" value="▼"/> | | | | |
| Chain List | Display Style (Superchain or by Chain) | Data Granularity (Contract or App) | | | | |
| <input type="button" value="All"/> <input type="button" value="X"/> | <input type="button" value="Split by Chain"/> <input type="button" value="▼"/> | <input type="button" value="Contract Level"/> <input type="button" value="▼"/> | | | | |
| Top Contracts by User Transactions To | | | | | | |
| Chain | Project (or address) | Contract Name | Δ Txns vs Prior Period | % Change Txns | Gas Used / Sec | Δ Gas |
| World Chain | 0xca11bde05977b36311 | None | 57.06K | 17.38% | 1.41M | |
| Base | Uniswap | V2 Router02 | -1.55K | -0.41% | 601.72K | |
| Base | Uniswap | UniversalRouter | -66.33K | -16.22% | 583.60K | |
| Base | 0x2f16386bb377090160 | None | 281.16K | 500.26% | 218.99K | |
| Base | 0x25f396d9a5cd1e359 | None | 232.88K | null | 132.77K | |
| Base | 0xc5bf05cd32a14bfff70 | None | -85.62K | -27.18% | 85.34K | |
| Base | Infinitism (ERC-4337) - A | EntryPoint v2 | -9.90K | -5.82% | 772.84K | |
| Base | 0xcabec88bb5319e22c5 | None | 59.76K | 76.10% | 33.61K | |
| SwanChain | 0xaf90ac6428775e1be0 | None | -11.27K | -7.82% | 53.97K | |
| Mint | 0x12906892aaa384ad55 | None | 59.93K | 91.64% | 97.63K | |

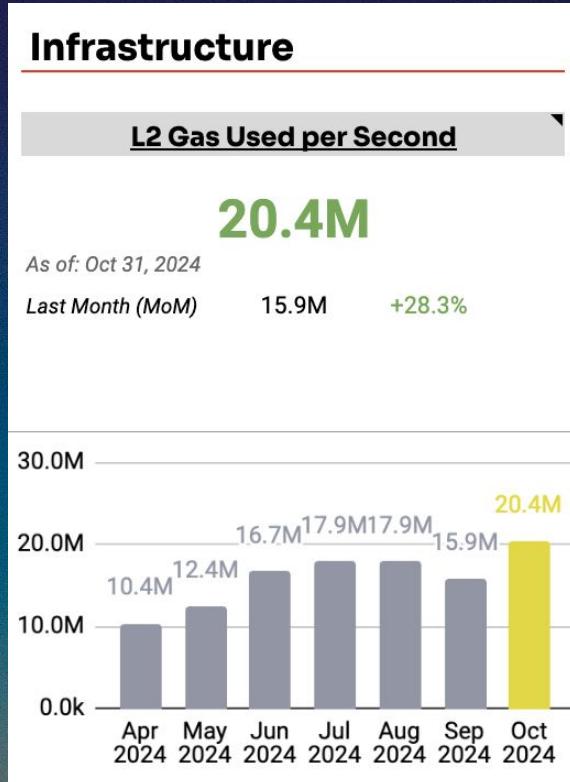
*Source: [Superchain: App / Contract Growth](#)



Metric 2: Gas per Second

- Reflects the **amount of computational work that the network handles per second.**
 - It measures network activity and efficiency.
 - Usually used concurrently with transactions.

*Source: [Superchain Health Dashboard](#)



Metric 3: App TVL & Assets Onchain

- App TVL captures **economic value and liquidity within the ecosystem.**
- On the other hand, **assets onchain is the sum of canonical bridged tokens, externally bridged tokens and native tokens** as per [L2Beat](#).

Value Onchain

L2 App TVL (Total Value Locked)

\$3.6B

As of: Oct 31, 2024

| Last Month (MoM) | \$3.4B | +8.7% |
|--------------------------------|--------|---------|
| % of L2s | 40.2% | +3.86pp |
| % of Crypto | 4.0% | +0.20pp |
| 15 / 50 L2s / 287 Total Chains | | |



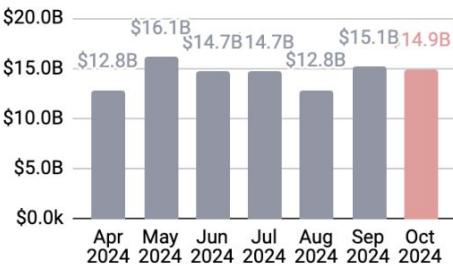
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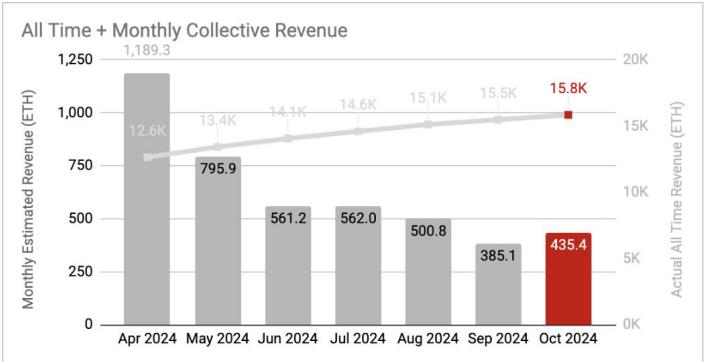
*Source: [Superchain Health Dashboard](#)



Metric 4: Collective Revenue

- Chains that are part of the Optimism Collective **contribute the greater of (a) 2.5% sequencer revenue, or (b) 15% of the net onchain sequencer profit**

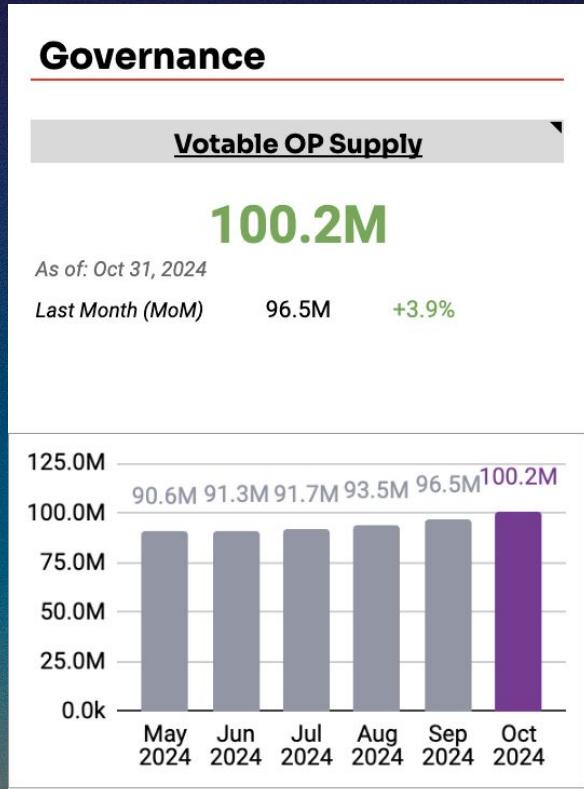
Optimism Collective Revenue - As of: Oct 31, 2024



*Source: [Superchain Health Dashboard](#)

Metric 5: Votable OP Supply

- Represents **the total amount of OP delegated to vote**
- Why do we care?
 - Capture resistance
 - Expected to act rationally in preserving or increasing the economic well-being of the Optimism Collective



*Source: [Superchain Health Dashboard](#) and [The Future of Optimism Governance](#)





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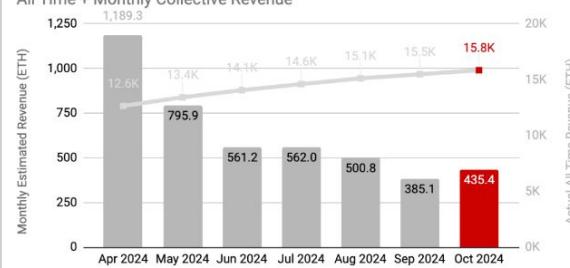
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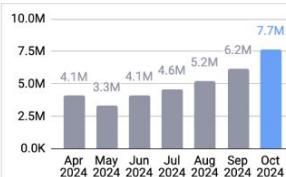
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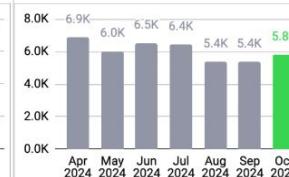


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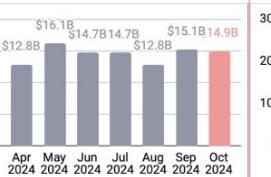


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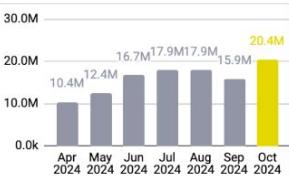
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Infrastructure

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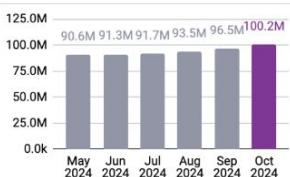
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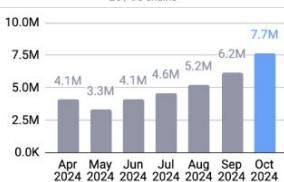
Superchain - Network Usage

Daily L2 Transactions

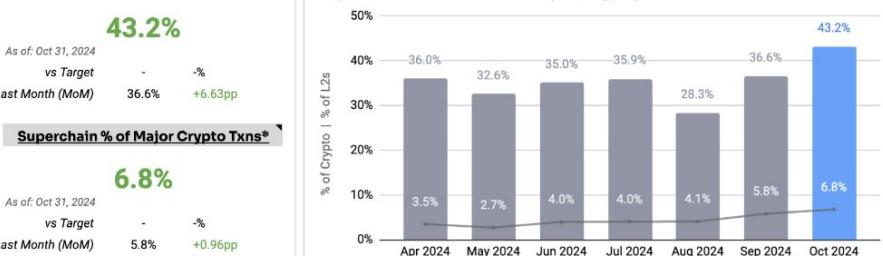
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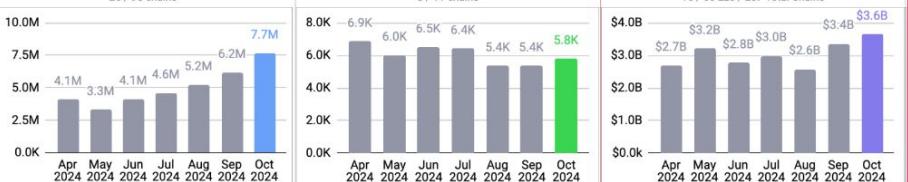


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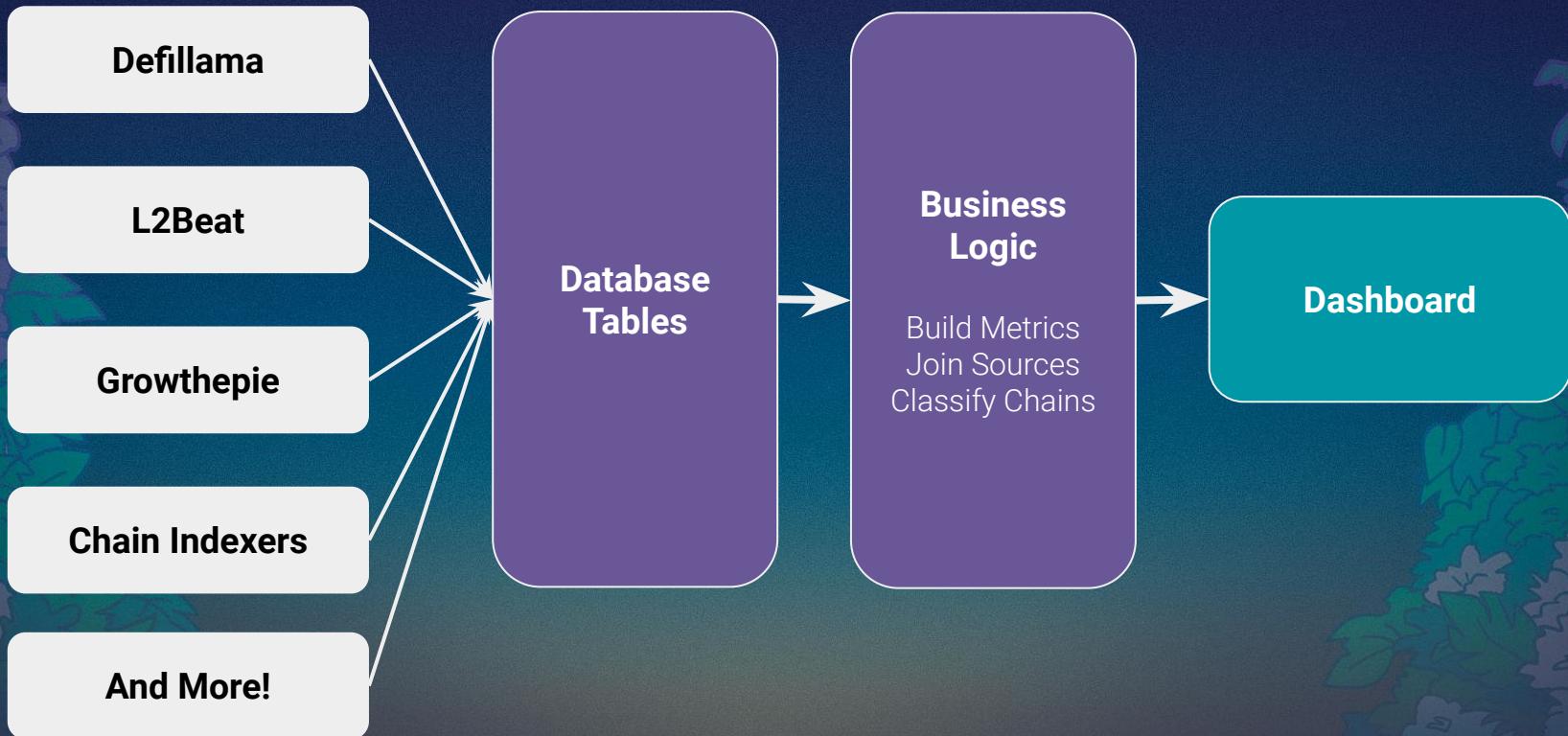
Influence

- **Source of truth & rallying point across the whole Collective:**
Labs, Foundation, Chain Teams, Governance Delegates, Grants Councils, etc
- **Growth Opportunities**
Where do we lag behind the industry?
- **Further Research Opportunities**
Surface the most impactful questions
- **Goal Setting**



How We Built This

Daily API Calls





Before Diving In...
Questions, Comments?



Section 3

Let's Build (Workshop Time)

Getting Started

Resources on GitHub:

[ethereum-optimism/op-analytics/](https://github.com/ethereum-optimism/op-analytics/tree/main/demos/devcon2024) [demos/devcon2024](https://github.com/ethereum-optimism/op-analytics/tree/main/demos/devcon2024)



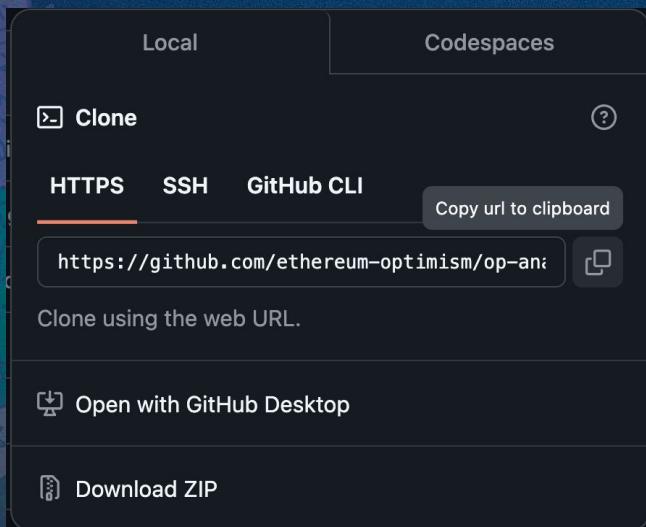
Optional: Beginner-to-Intermediate Python and SQL

For Everyone: Use resulting data files to build visuals



Clone the Entire Github Repo

`git clone <https://github.com/ethereum-optimism/op-analytics.git>` in your terminal



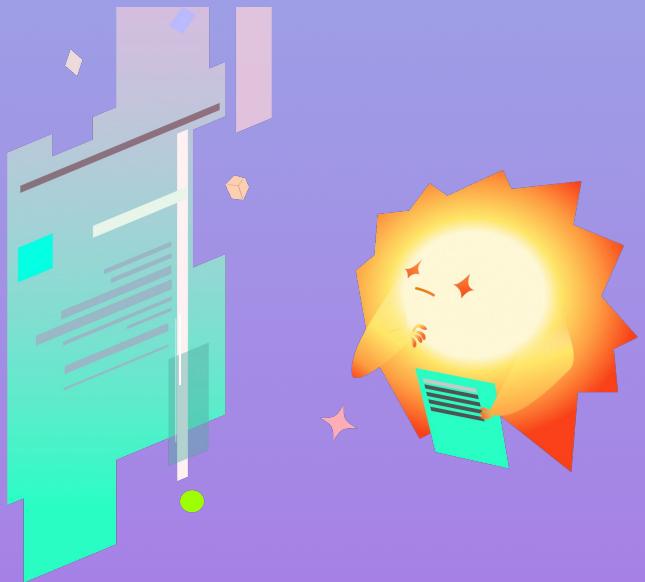
Or Just the Demo Folder

Copy the demo url into <https://download-directory.github.io/>

A screenshot of a terminal window with a dark background. The title bar says 'download-directory · github · io'. In the terminal, the URL <https://github.com/ethereum-optimism/op-analytics/tree/main/demos/devcon2024> is pasted into the input field. Below the input field is a link 'info + token'. The terminal output shows the command 'git clone https://github.com/ethereum-optimism/op-analytics/tree/main/demos/devcon2024' followed by 'Downloaded 20 files! Done!'. A long list of 20 files is listed, including 'demos/devcon2024/readme.md', 'demos/devcon2024/processed/chain_metadata.csv', and 'demos/devcon2024/processed/all_chains_data_monthly.csv'. At the bottom of the terminal, it says 'Will download 20 files', 'Retrieving directory info', 'Repo: ethereum-optimism/op-analytics', and 'Directory: /demos/devcon2024'.



Let's Build



- 01 Walk through a few data sources
- 02 Show how we join them together
- 03 Build new ecosystem charts!
- 04 Show and tell?



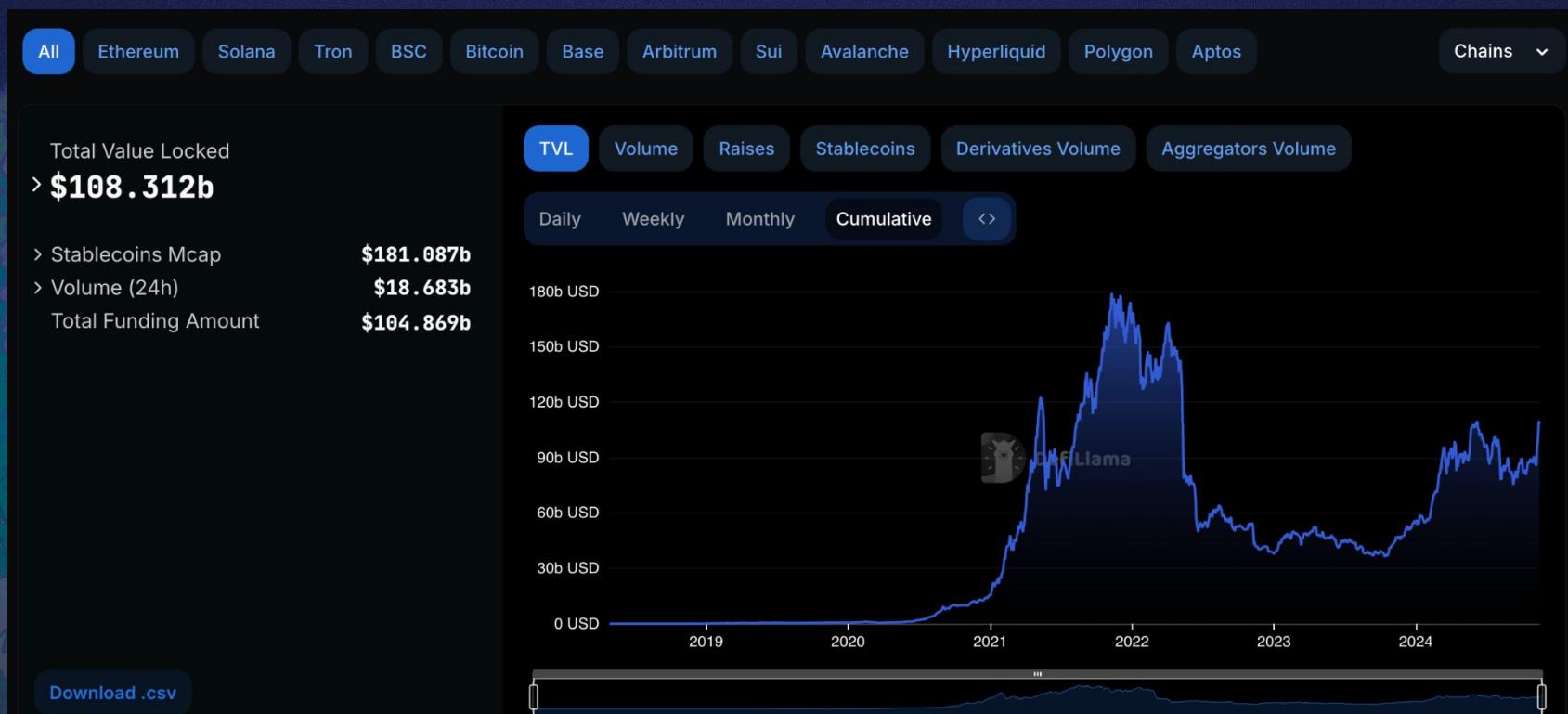
What You'll See in the Repo

- **Readme with links**
- **Python files with functions for each data source**
- **Notebooks to call the data pulls, then process & join data together**
- **Output data files (csv) to build with**

| |
|---------------------|
| downloads |
| images |
| processed |
| api_defillama.py |
| api_growthe.py |
| api_l2beat.py |
| api_utilities.py |
| download_data.ipynb |
| process_data.ipynb |
| readme.md |



Data Sources: Defillama



Data Sources: Defillama

| Name | Protocols | 1d Change | 7d Change | 1m Change | TVL | Bridged TVL | Stables |
|---|-----------|-----------|-----------|-----------|----------|-------------|-----------|
| 1  Ethereum | 1220 | +5.14% | +7.58% | +25.88% | \$60.19b | | \$91.577b |
| 2  Solana | 178 | -8.56% | +12.52% | +29.63% | \$7.853b | | \$3.845b |
| 3  Tron | 34 | +1.13% | +9.34% | -0.01% | \$7.35b | | \$59.917b |
| 4  BSC | 811 | +1.80% | +8.52% | +9.58% | \$5.126b | | \$5.477b |
| 5  Bitcoin | 43 | +4.08% | +22.86% | +388% | \$4.038b | | |
| 6  Base | 386 | +2.04% | +15.48% | +26.03% | \$3.122b | | \$3.598b |
| 7  Arbitrum | 728 | +2.02% | +12.08% | +15.64% | \$2.855b | | \$4.88b |
| 8  Sui | 43 | +3.33% | +24.49% | +24.43% | \$1.367b | | \$377.98m |
| 9  Avalanche | 410 | +4.09% | +18.07% | +13.90% | \$1.246b | | \$1.733b |
| 10  Hyperliquid | 3 | +5.45% | +27.23% | +57.82% | \$1.178b | | |



Data Sources: L2Beat

Value Locked

[View details >](#)**\$42.88B****▲ 11.5% / 30d**

\$45.00B

\$39.60B

\$34.20B

21 Oct

28 Oct

04 Nov

11 Nov

L2BEAT

Activity

[View details >](#)**367.63 TPS**

Scaling factor: 25.30x ⓘ

490.00 TPS

245.00 TPS

0.00 TPS

21 Oct

28 Oct

04 Nov

11 Nov

L2BEAT

Rollups 51

Validiums & Optimiums 66

Others

| ◆ # | ◆ NAME | RISKS | ◆ TYPE ⓘ | ◆ STAGE | ◆ TOTAL VALUE LOCKED ⓘ | ◆ PAST DAY TPS ⓘ |
|-----|--|---|---|---------|--|---|
| 1 |  Arbitrum One |  | Optimistic Rollup  | STAGE 1 | \$15.41B  12.0% | 29.13  3.61% |
| 2 |  Base |  | Optimistic Rollup  | STAGE 0 | \$9.62B  13.8% | 77.07  7.94% |
| 3 |  OP Mainnet |  | Optimistic Rollup  | STAGE 1 | \$6.54B  8.23% | 11.61  6.44% |
| 4 |  Pit |  | Optimistic Rollup  | STAGE 0 | \$1.52B  11.7% | 7.10  1.50% |



Data Sources: Growthepie

Layer 2 Traction

Aggregated daily metrics across all tracked Layer 2s.

Transaction Count

18.51M

ACTIVITY

Stablecoin Market Cap

\$9.74B

VALUE LOCKED

Revenue

\$513.69K

ECONOMICS



Fundamentals

ACTIVITY

 Active Addresses

 Transaction Count

 Throughput

VALUE LOCKED

 Stablecoin Market Cap

 Total Value Locked

CONVENIENCE

 Transaction Costs

Economics

 Overview

BUSINESS

 Revenue

 Rent Paid to L1

 Onchain Profit

Data Sources: Growthepie

| Chain | Purpose |  |  |  |  |  |  |  |  |  |  |  |  | |
|--|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|-----|
|  Base | General Purpose (EVM) | 2 | 1 | 1 | 2 | 1 | 3 | 1 | 9 | ... | ... | ... | 1 | ... |
|  Arbitrum One | General Purpose (EVM) | 1 | 3 | 2 | 1 | 2 | 2 | 2 | 11 | 3 | 3 | 2 | ... | ... |
|  OP Mainnet | General Purpose (EVM) | 3 | 5 | 4 | 3 | 5 | 7 | 4 | 4 | 2 | 5 | 3 | ... | ... |
|  Linea | General Purpose (EVM) | 7 | 9 | 6 | 9 | 4 | 10 | 3 | 19 | ... | ... | 13 | ... | ... |
|  Taiko | General Purpose (EVM) | 15 | 2 | 3 | 13 | 3 | 1 | 16 | 12 | 9 | 15 | 6 | ... | ... |
|  Gravity | General Purpose (EVM), Quests | 14 | 4 | 5 | ... | 12 | 12 | ... | 3 | 14 | 11 | 7 | ... | ... |
|  ZKsync Era | General Purpose (EVM) | 8 | 10 | 9 | 7 | 8 | 8 | 6 | 15 | 7 | 8 | ... | ... | ... |
|  Mantle | General Purpose (EVM) | 4 | 8 | 7 | 4 | 11 | ... | 10 | 5 | 2 | 8 | ... | ... | ... |
|  Scroll | General Purpose (EVM) | 6 | 14 | 12 | 8 | 7 | 5 | 8 | 18 | 12 | 14 | 14 | ... | ... |
|  Zora | NFTs (EVM) | 20 | 15 | 8 | 19 | 13 | 16 | 9 | 13 | ... | ... | 12 | ... | ... |
|  Metis | General Purpose (EVM) | 12 | 16 | 13 | 10 | 17 | 14 | ... | 5 | 13 | 10 | 17 | ... | ... |



Pull The Data

download_data.ipynb

In [5]:

```
print('getting growthepie metadata')
gtp_md = gtp.get_growthepie_metadata()

print('getting growthepie fundamentals data')
gtp_fun = gtp.get_growthepie_fundamentals()
#filter dates
gtp_fun = gtp_fun[gtp_fun['date']>=start_date]

print('yay')
```

```
getting growthepie metadata
getting growthepie fundamentals data
https://api.growthepie.xyz/v1/fundamentals_full.json
yay
```

In [6]:

```
num_chains = len(gtp_md[gtp_md['chain_name']!= '-'])
print(f"Growthepie: Total Amount of Chains: {num_chains}")
```

```
Growthepie: Total Amount of Chains: 24
```

In [7]:

```
gtp_md.head(5)
```

Out[7]:

| | name | url_key | chain_type | caip2 | evm_chain_id | deployment | chain_name | description | da_layer | symbol | ... | l2beat_i |
|---|--------------|----------|------------|--------------|--------------|------------|------------|---|------------------|--------|-----|----------|
| 0 | Ethereum | ethereum | L1 | eip155-1 | 1.0 | PROD | Ethereum | Ethereum, proposed by Vitalik Buterin in 2013 ... | None | ETH | ... | ethereum |
| 1 | All L2s | all-l2s | - | None | NaN | PROD | - | None | None | None | ... | None |
| 2 | Arbitrum One | arbitrum | L2 | eip155-42161 | 42161.0 | PROD | Arbitrum | Arbitrum One is developed by Offchain Labs. It... | Ethereum (blobs) | ARB | ... | arbitrum |
| 3 | Base | base | L2 | eip155-8453 | 8453.0 | PROD | Base | Base is an Ethereum Layer 2 offering a | Ethereum (blobs) | None | ... | base |



Try to Join the Data Together

process_data.ipynb

```
FROM defillama_chains dfl
FULL OUTER JOIN growthepie_metadata gtp
  ON replace(lower(dfl.name), ' ', '') = replace(lower(gtp.chain_name), ' ', '')
  OR dfl.chainId = gtp.evm_chain_id
FULL OUTER JOIN l2beat_summary l2b
  ON replace(lower(dfl.name), ' ', '') = replace(lower(l2b.name), ' ', '')
  OR replace(lower(gtp.name), ' ', '') = replace(lower(l2b.name), ' ', '')
```



Build Aggregate Metrics

process_data.ipynb

```
SELECT
    DATE_TRUNC('month', date) AS month,
    name_mapped

    , SUM(transactions_per_day) AS transactions_per_month
    , AVG(transactions_per_day) AS transactions_per_day
    -- fees
    , SUM(costs_total_eth) AS costs_total_eth_per_month, AVG(costs_total_eth) AS costs_total_eth_per_day
    , SUM(fees_paid_eth) AS fees_paid_eth_per_month, AVG(fees_paid_eth) AS fees_paid_eth_per_day
    , SUM(profit_eth) AS profit_eth_per_month, AVG(profit_eth) AS profit_eth_per_day
    -- activity
    , AVG(gas_per_second) AS gas_per_second
    -- value
    , MAX_BY(app_tvl_usd, date) AS app_tvl_usd_latest, AVG(app_tvl_usd) AS app_tvl_usd_average
    , MAX_BY(total_assets_onchain_usd, date) AS total_assets_onchain_usd_latest, AVG(total_assets_onchain_usd)

    -- metadata
    , chain_id_mapped, layer, stage, purposes, raaS, stack_name, da_layer, infra_label, is_ethereum_ecosystem
FROM daily_data_df
```



Build Charts! Find Insight!

Google Sheet

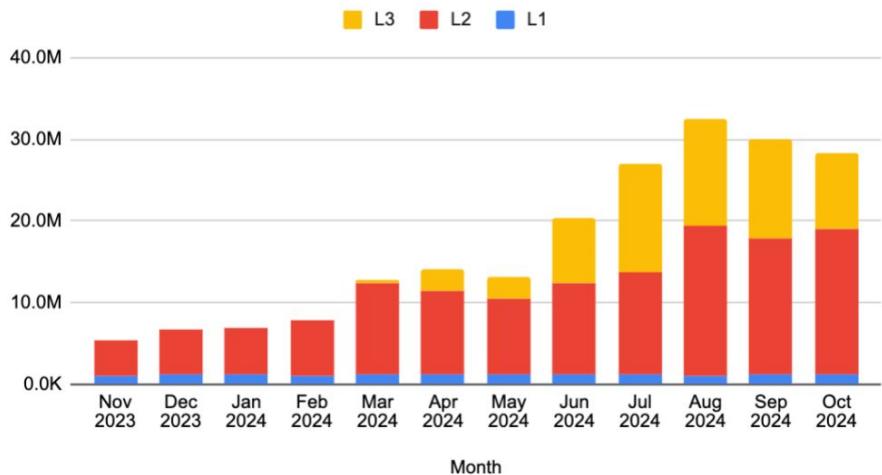
| month | name_mapped | transactions_per_day | profit_eth_per_day | gas_per_second | app_tvl_usd_latest | total_assets_onchain | chain_id | layer | stage | purposes | raas | stack_name | da_layer | infra_label |
|------------|------------------|----------------------|--------------------|----------------|--------------------|----------------------|----------|-------|---------------|-------------------------|---------------|-------------|---------------|---------------|
| 2024-11-01 | Base | 6594199.833 | 55.67189066 | 15.01806796 | 2566176401 | 7809206714 | 8 | L3 | Stage 0 | ['Universal'] | Self-hosted | OPStack | EthereumBlobs | Superchain |
| 2024-11-01 | Xai | 5588635.667 | | | 1157725.322 | 2121575.65 | | L3 | NotApplicable | ['Universal', 'Gaming'] | | Orbit | DAC | |
| 2024-11-01 | Taiko | 4473430.333 | 6.952252487 | 1.601038461 | 77848583.4 | 104112031.9 | 167 | 00 | L2 | Stage 0 | ['Universal'] | Self-hosted | | EthereumBlobs |
| 2024-11-01 | Arbitrum One | 1958651.5 | 9.018578789 | 4.0423 | 2437874966 | 12720218888 | 42 | 61 | L2 | Stage 1 | ['Universal'] | Self-hosted | Nitro | EthereumBlobs |
| 2024-11-01 | Gravity | 1722692.5 | | 1.544507097 | 2983667.518 | 127041550.3 | 1 | 25 | L2 | NotApplicable | ['Universal'] | Conduit | Orbit | DAC |
| 2024-11-01 | PlayBlock | 1435160 | | | | | 0 | L3 | NotApplicable | ['Universal', 'Gan'] | Gelato | Orbit | DAC | |
| 2024-11-01 | Ethereum | 1118666 | | 1.254828667 | 50485814859 | | | 1 | L1 | | | Self-hosted | | |
| 2024-11-01 | Proof of Play Ap | 886191.6667 | | | | 679852.6 | | L3 | NotApplicable | ['Universal', 'Gan'] | Conduit | Orbit | DAC | |
| 2024-11-01 | OP Mainnet | 765740.3333 | 5.069409711 | 3.643967106 | 660527579.6 | 5492392617 | 10 | L2 | Stage 1 | ['Universal'] | Self-hosted | OPStack | EthereumBlobs | Superchain |
| 2024-11-01 | Proof of Play Bo | 591165.8333 | | | | 134026.42 | | L3 | NotApplicable | ['Universal', 'Gan'] | Conduit | Orbit | DAC | |
| 2024-11-01 | Blast | 586120.3333 | 1.735575698 | 2.508033074 | 596740323.8 | 1258241673 | 81 | 57 | L2 | Stage 0 | ['Universal'] | Self-hosted | OPStack | EthereumBlobs |
| 2024-11-01 | World Chain | 439270 | 0.287288155 | 1.792250166 | 1578155.376 | 130785584.9 | 30 | L2 | Stage 0 | ['Universal', 'Iden'] | Alchemy | OPStack | EthereumBlobs | Superchain |
| 2024-11-01 | WINR | 354931.3333 | | | | 6302367.1 | | L3 | NotApplicable | ['Universal', 'Gan'] | Conduit | Orbit | DAC | |
| 2024-11-01 | Mantle | 320495.3333 | | 0.5890779573 | 511556310.9 | 1520313170 | 5 | 00 | L2 | NotApplicable | ['Universal'] | Self-hosted | OPStack | CustomDA |
| 2024-11-01 | Immutable X | 238658 | | | | 85269761.33 | | L2 | NotApplicable | ['NFT', 'Exchange'] | Self-hosted | StarkEx | DAC | SHARP |
| 2024-11-01 | Manta Pacific | 230702.5 | 0.1479590536 | 0.418995488 | 38340243.75 | 471593530.2 | 69 | L2 | NotApplicable | ['Universal'] | Caldera | OPStack | Celestia | |
| 2024-11-01 | Linea | 213120 | 7.062427668 | 0.444424327 | 450428582.2 | 799951763.2 | 59 | 44 | L2 | Stage 0 | ['Universal'] | Self-hosted | | EthereumBlobs |
| 2024-11-01 | Kroma | 190563.5 | | | 525619.3812 | 18042467.67 | 25 | L2 | Stage 0 | ['Universal'] | | OPStack | EthereumBlobs | Superchain |
| 2024-11-01 | Mint | 182271.3333 | | | 283409.0574 | 2171168.23 | 18 | L2 | Stage 0 | ['Universal', 'NFT'] | Conduit | OPStack | EthereumBlobs | Superchain |



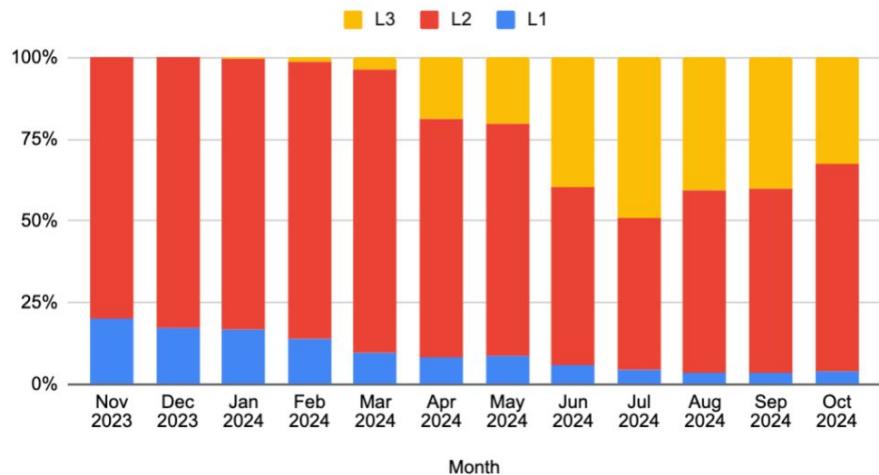
Build Charts! Find Insight!

Google Sheet

Ethereum Ecosystem: Transactions per Day



Ethereum Ecosystem: Transactions per Day (Share of Total)



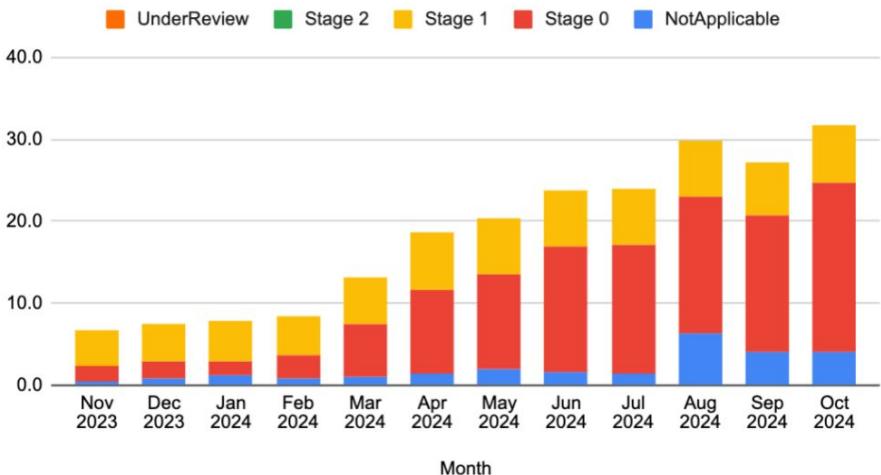
Sources: Growthepie & L2Beat



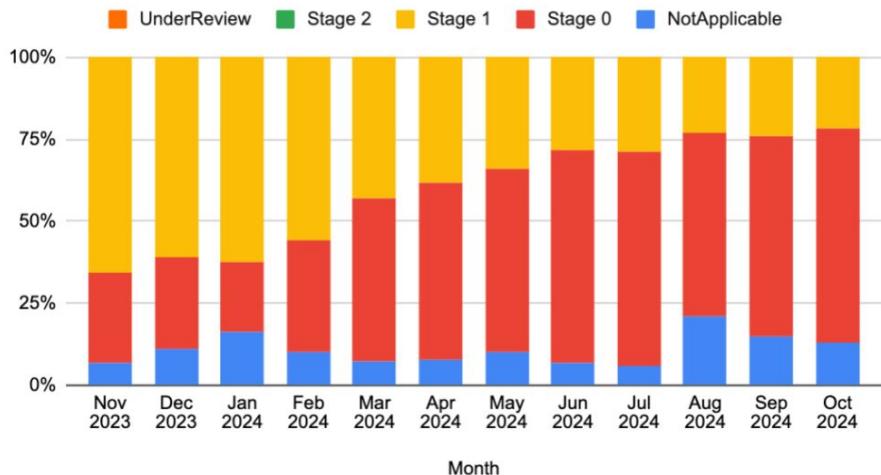
Build Charts! Find Insight!

Google Sheet

Gas Used per Second by Latest Stage



Gas Used per Second by Latest Stage (Share of Total)



Gas per Second: Growthepie | Stage Designation: L2Beat



Build Charts! Find Insight!

[Google Sheet](#)

Your Turn!

Try any analysis & charting tools of your choice



Section 4

Wrapping it Up – The Collective Data Vision

Opportunities & Remaining Problems to Solve

Data source interoperability and completeness

- It's hard to connect data from different providers still. Chains have inconsistent names, and not everyone uses chain id

Specializations we wish existed as open data sets:

- Active humans (to the best of our ability)
- Active developers (various ways to measure)
- Cross-chain activity and asset transfer
- Chain ecosystem-level data

"Cross-chain analysis is still as hard as cross-chain messaging"



Wrapping Up

Takeaway 1

Why you should build?

- Metrics matter in context
- Holistic view of the market
- Ecosystem-wise data driven culture
- Metrics are evolving

Takeaway 2

There are many open data sources and what you can build:

- Your own ecosystem
- Stablecoins
- Decentralized governance
- Cross-chain assets
- Other emerging trends

Takeaway 3

We're building our data products in [op-analytics](#) on Github.

Still of course WIP, but contributions are welcome!

One more thing...



Select * from Superchain



 Optimism Superchain Raw Onchain Data

+ SUBSCRIBE

Tables

- Blocks
- Transactions
- Logs
- Traces

All tables are partitioned by date (`dt`) and clustered by chain name (`chain`).

Current Status

We are currently in the process of backfilling data for all chains up to genesis.

The table is currently not being updated daily at a fixed cadence. Once we have a better idea of what our delivery SLA will be, we will update this description.

At the moment data is complete only for the following months:

- 2024/10
- 2024/09



Thank you!

Michael Silberling

OP Labs
@MSilb7

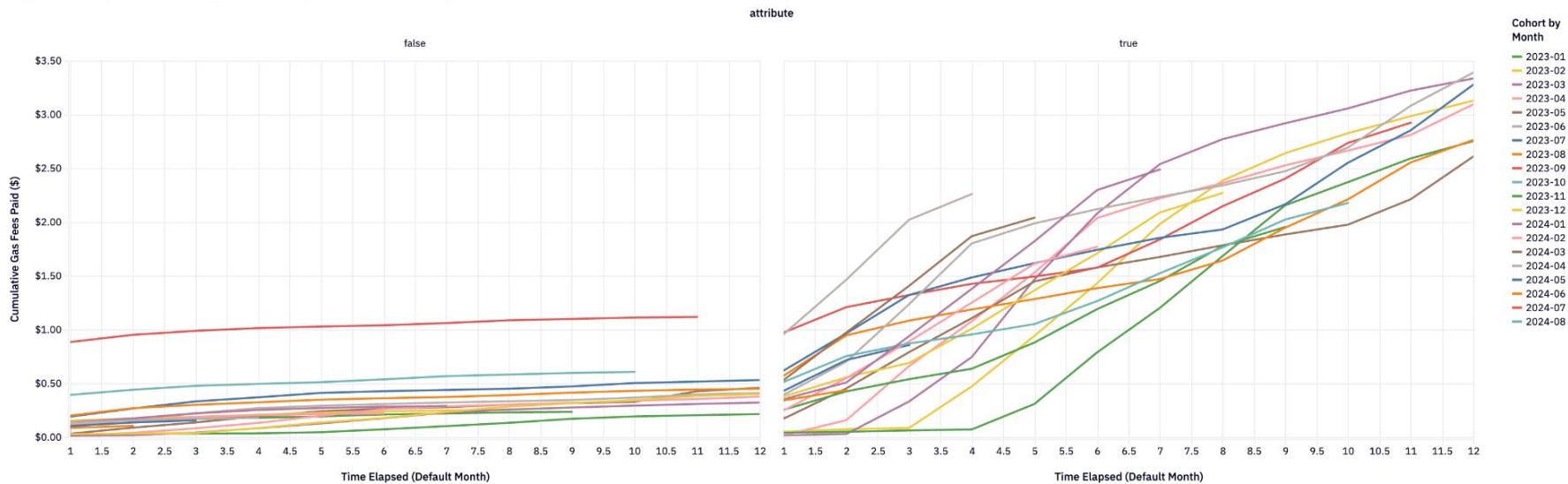
Chuxin Huang

OP Labs
@chuxin_h

Appendix : Comparing LTV of Users

1. LTV (L2 Gas Paid) per User USD

Avg. Actual LTV per User (L2 Component in \$) by Selected Attribute (Up to 12 Mths)



Appendix : Comparing LTV of Users

3.1 Heatmap of Retention by Attribute

| Chain | Month | Cohort | Attribute | Time Elaps... | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 |
|----------|---------|--------|-----------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | | | Cohort Size | # % Retained |
| optimism | 2023-01 | False | 188118 | 23.8% | 24.9% | 16.2% | 17.1% | 14.5% | 11.7% | 12.4% | 7.7% | 13.3% | | |
| | | True | 2364 | 67.3% | 60.9% | 53.7% | 56.3% | 64.8% | 63.1% | 47.0% | 51.9% | 44.0% | | |
| | 2023-02 | False | 130798 | 19.6% | 16.0% | 14.0% | 14.9% | 13.7% | 9.5% | 6.7% | 10.0% | 11.5% | | |
| | | True | 3443 | 56.1% | 51.4% | 52.6% | 53.0% | 52.4% | 44.6% | 33.8% | 36.4% | 38.1% | | |
| 2023-03 | False | 214561 | 17.9% | 16.5% | 15.7% | 14.4% | 12.2% | 8.3% | 11.8% | 11.5% | 8.4% | | | |
| | | True | 4768 | 53.3% | 55.8% | 56.4% | 58.4% | 50.0% | 37.5% | 36.8% | 39.3% | 43.2% | | |
| | 2023-04 | False | 428545 | 34.4% | 28.7% | 25.1% | 21.1% | 15.1% | 16.2% | 18.0% | 12.8% | 13.7% | | |
| | | True | 7687 | 63.8% | 59.7% | 60.8% | 52.3% | 38.2% | 37.1% | 41.6% | 40.5% | 43.3% | | |
| 2023-05 | False | 487961 | 28.6% | 23.4% | 18.4% | 12.6% | 15.5% | 15.4% | 11.5% | 13.0% | 13.0% | | | |
| | | True | 7748 | 56.2% | 54.5% | 53.0% | 34.7% | 33.2% | 40.4% | 39.0% | 40.5% | 40.3% | | |
| | 2023-06 | False | 596307 | 27.5% | 20.1% | 15.0% | 16.6% | 16.2% | 12.6% | 12.1% | 15.2% | 16.5% | | |
| | | True | 5811 | 57.3% | 49.9% | 35.6% | 34.5% | 37.6% | 37.1% | 38.9% | 42.5% | 45.5% | | |
| 2023-07 | False | 655792 | 26.7% | 20.3% | 17.7% | 16.0% | 12.1% | 11.3% | 12.3% | 15.1% | 18.7% | | | |
| | | True | 5728 | 50.0% | 36.5% | 32.5% | 36.4% | 40.4% | 39.7% | 39.7% | 45.6% | 44.3% | | |
| | 2023-08 | False | 537534 | 22.3% | 19.5% | 18.0% | 12.3% | 14.0% | 13.7% | 12.9% | 12.8% | 9.7% | | |
| | | True | 5760 | 36.9% | 30.9% | 31.0% | 36.5% | 34.9% | 39.9% | 39.1% | 37.0% | 37.7% | | |

36 rows ↴