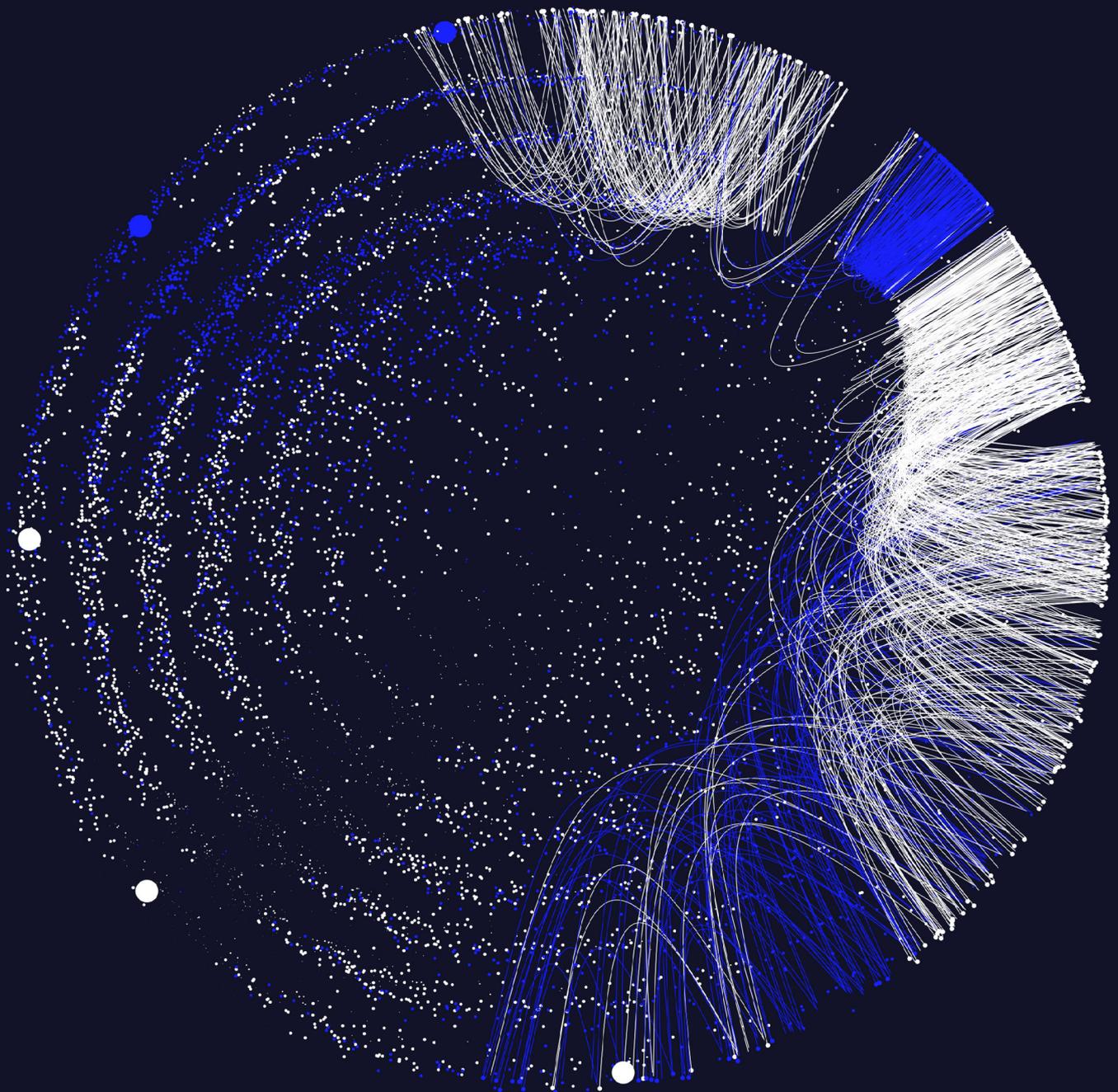


[Blockchain

/Developer Report]

<Q2 2020>



[This report analyses
key blockchain
developer trends over
the course of the past
12 months]

The full methodology, data sources and code used for the analysis are open-source and available on the **Outlier Ventures** GitHub. The report and code are written by **Theo Turner**.

<The last 12 months

/Executive summary>

The majority of major protocols saw a **moderate decline** in developer activity (no more than **20%**). Likely due to **COVID-19**, though a select few experienced more significant declines.

Polkadot. (+44%) and **CØSMOS** (+15%) saw a **substantial** rise in developer activity, though growth may not continue at this rate given their recent major releases.

 **THETA** (+931%) and  **CARDANO** (+580%) saw the largest increases in core development code updates, though these trends may also reverse given recent price action.

<The last 12 months

/Executive summary>

ethereum dominates in its share of smart contracts (79%), Dapps (82%) and daily active dapp users (more than twice the closest competition).

Recent entrant  Klaytn has quickly secured a top 5 spot in its share of smart contracts, its share of dapps and in daily active dapp users, though **COSMOS** and *Polkadot* are likely up-and-comers in this category.

Active Developers

A measurement of the **monthly active developers** over time. Commits across thousands of repositories from the top **12 development platforms** were analysed, with the commit date classified by month and developers de-duplicated.

<Active Developers /Executive summary>

The majority of major protocols saw a **moderate decline** in developer activity (no more than **20%**).

This decline may be attributed to **COVID-19** leading to a shift in priorities from R&D to bizdev across the industry. Furthermore, a **rapid market decline** over the months of February and April likely led to a decrease in external interest and therefore a fall in volunteer contributors.

<Active Developers

/Executive summary>

 EOS (-86%),  **BitcoinCash** (-63%) and  **TRON's** (-51%) saw significant declines in developer activity.

In the case of  EOS, there is likely continued decline following the 2019 launch of its main network and core developers moving away from the protocol (see later sections). The decline for  **BitcoinCash** is likely continued fallout following the  **Bitcoin^{sv}** hard fork. This trend may flatten or reverse as the event falls out of public memory.  **TRON** decline may be due to **negative price action**.

<Active Developers /Executive summary>

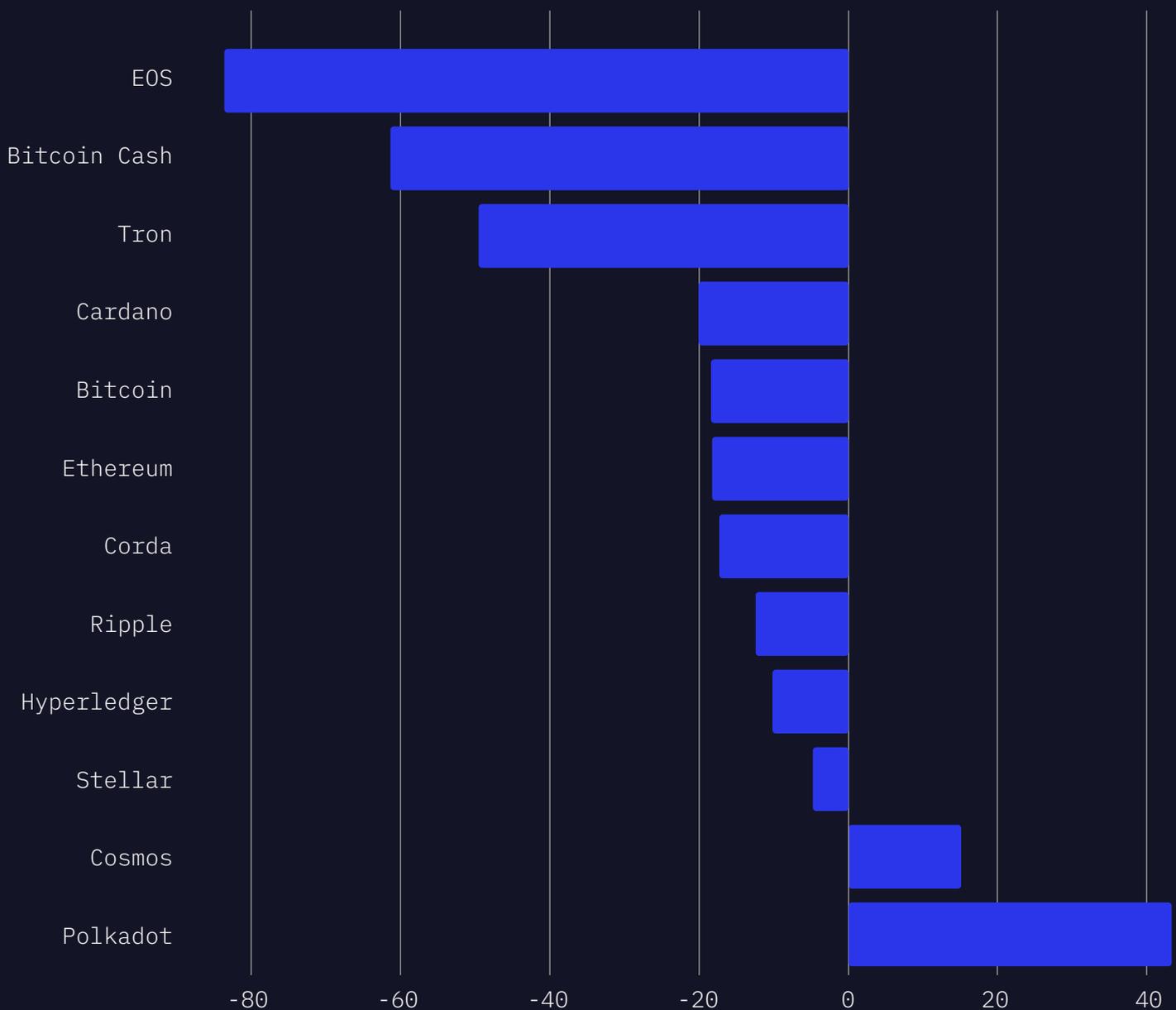
Polkadot. (+44%) and **CØSMOS** (+15%) saw substantial developer activity growth.

This increase is likely due to protocols abandoning proprietary chains in favour of battle-tested solutions in a post-**COVID** market with a reduced R&D budget.

Polkadot. in particular launched its mainnet at the end of May 2020, garnering increased interest from external developers. Growth at the current rate is unlikely to continue, c.f. the **CØSMOS** launch.

Change in active developers

The percentage change in developers building on each protocol over the past year.



Active developers Best growth

Polkadot saw the greatest increase in monthly active developers, growing 44%.



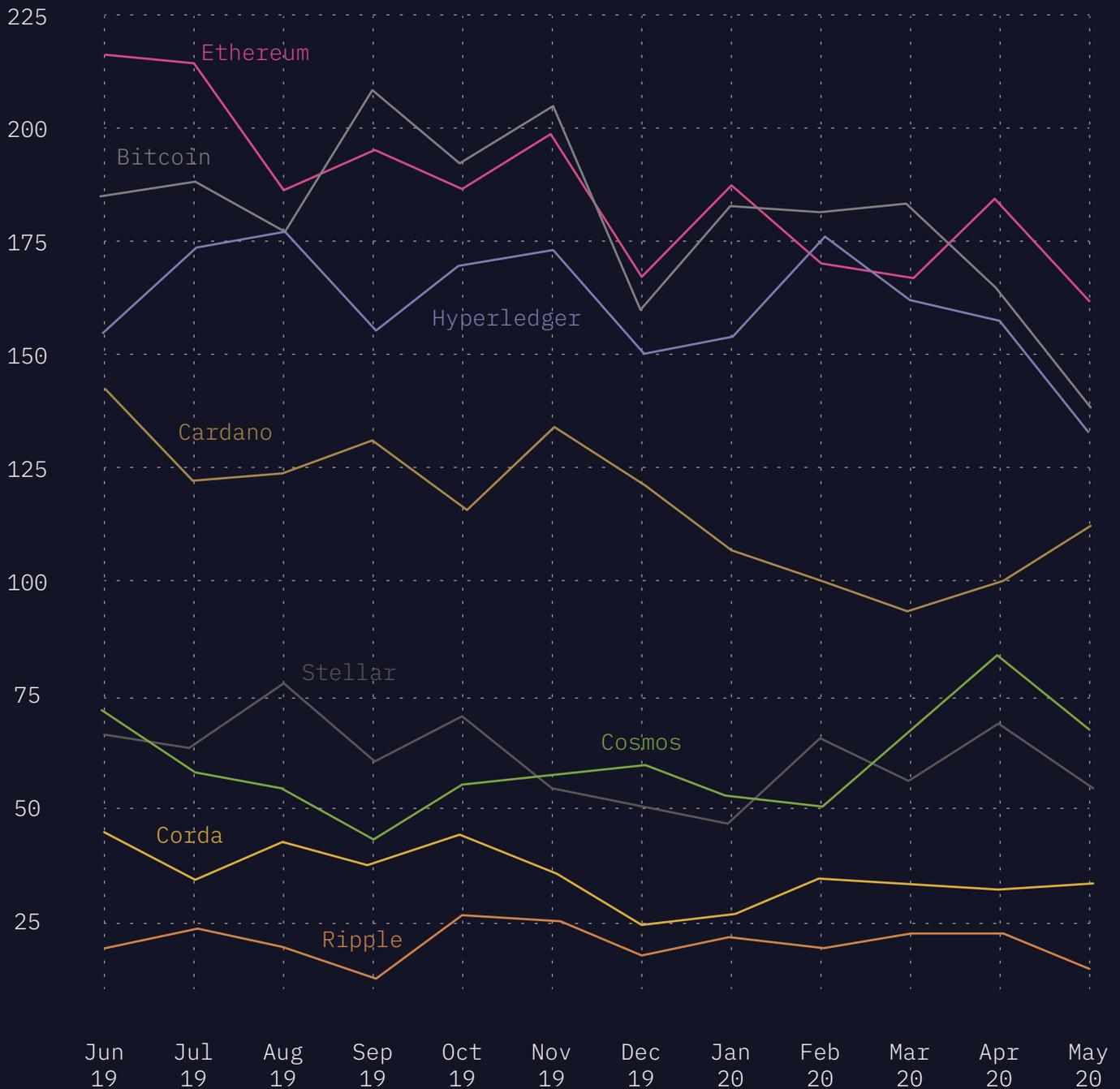
Active developers Greatest decline

EOS (-86%), Bitcoin Cash (-63%) and Tron (-51%) saw the largest declines in active developers.



Active developers Holding the fort

Most major protocols saw a modest decline in active developers (none greater than 20%). Cosmos grew 15%.



Core Development

A measurement of **weekly commits** and **code updates** over time to the core protocol organisation repositories.

The **top 30** open-source protocols by market capitalisation, plus the two leading **non-tokenised** platforms, were analysed. Commits as well as **line-by-line** additions and deletions to code across all repositories under each target organisation were **indexed**.

<Core Development

/Executive Summary>

Core protocol development across the industry was **highly volatile**.

Among the **top 30** by market capitalisation (plus **c.rda** and  **HYPERLEDGER**), roughly an even number of protocols saw **increased** and **decreased** core development activity. A large number of protocols experienced reduced activity over the holiday season and a slow recovery, likely due to **COVID-19**.

<Core Development

/Executive Summary>

 MAKER (-98%),  TRON (-96%) and  EOS (-94%) saw the largest declines in weekly code updates.  MAKER's drastic decline may be attributed to high development activity around the launch of multi-collateral DAI toward the end of 2019 and a failure to retain this momentum after the holiday season. Given  MAKER's dominance in DeFi collateralization (see **Further Reading**), this trend is likely to reverse.  TRON and  EOS's declines are likely due to the same reasons as with their active developer base.

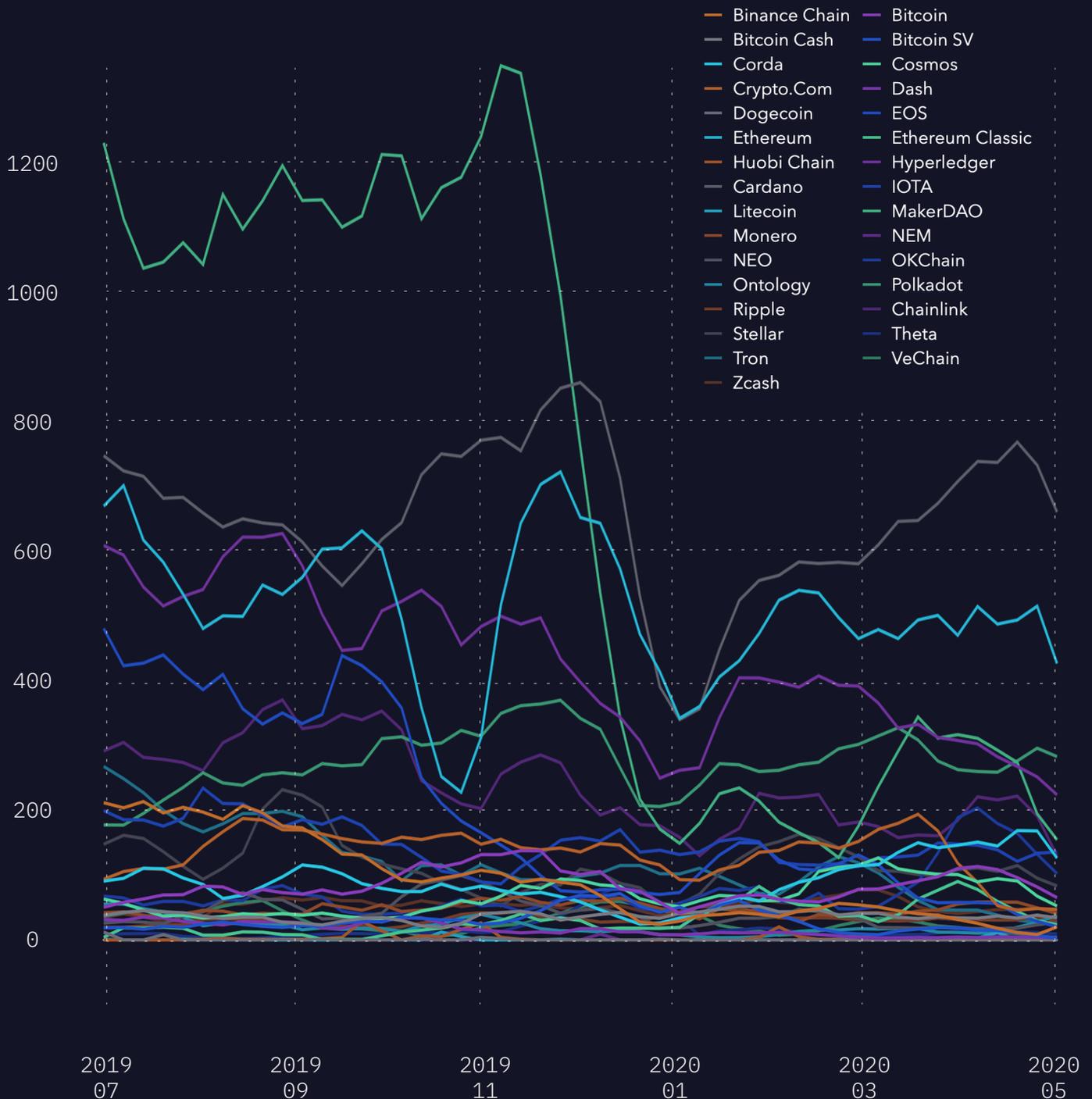
<Core Development

/Executive Summary>

 **THETA** (+931%) and  **CARDANO** (+580%) saw the largest increases in weekly code updates.  **THETA**'s meteoric rise is likely due to a combination of the launch of its second main network at the end of May, recent price action and low development activity mid-2019. The reason for  **CARDANO**'s growth is likely a combination of an upcoming release and recent price action. In both cases, such growth is unlikely to continue.

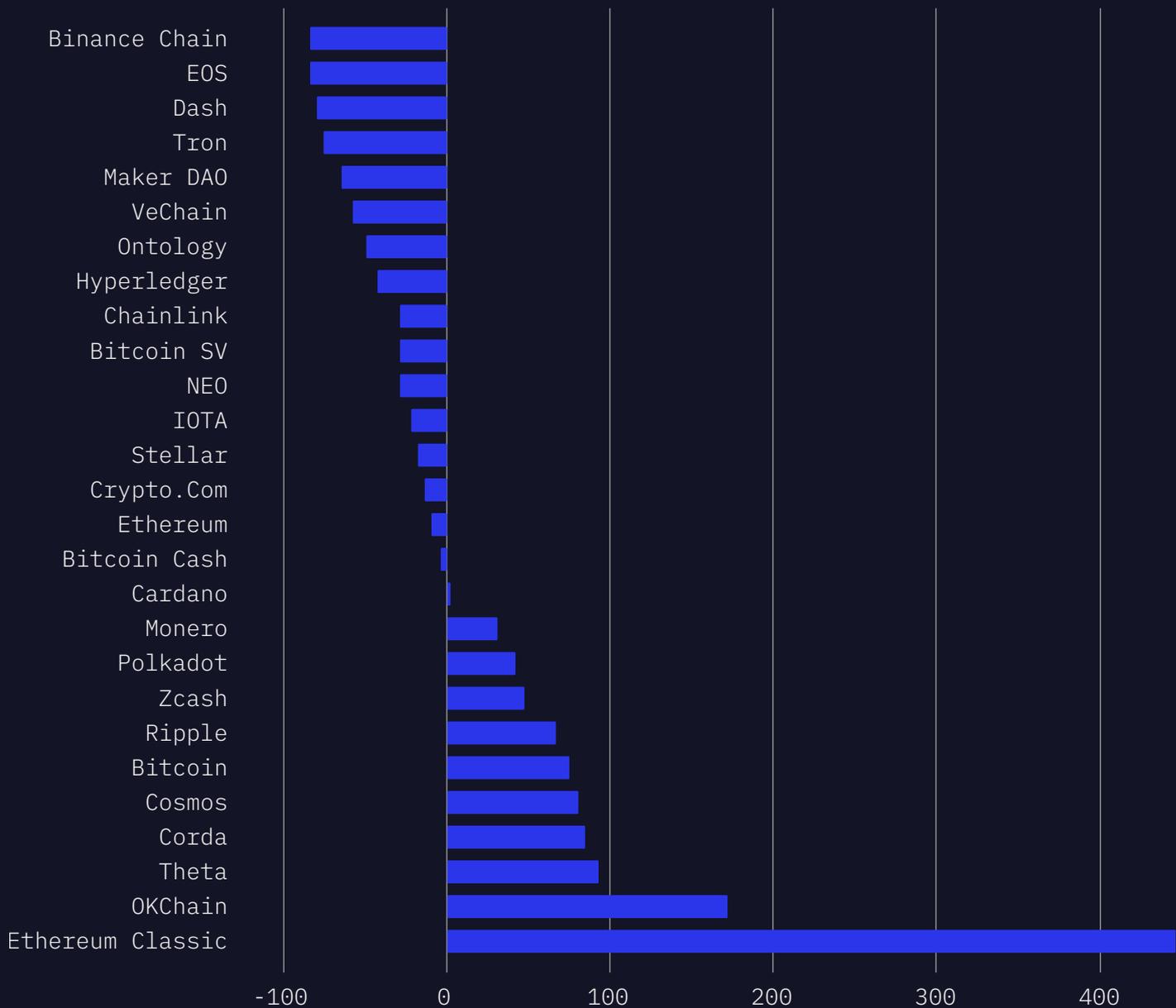
Commits to the core protocol

A graph of code commits for each protocol over the past year. The central drop-off is the holiday season.



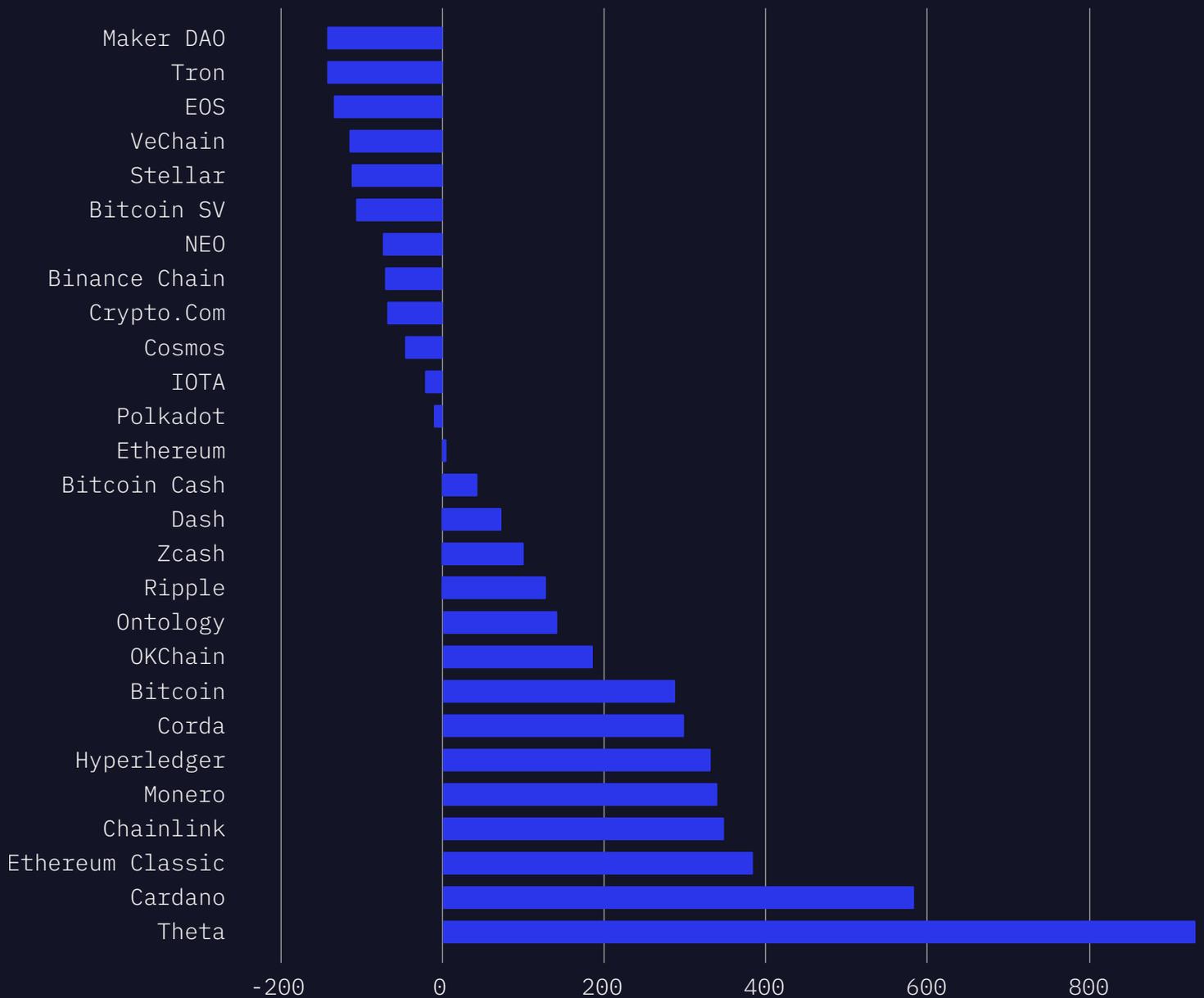
Change in commits

The percentage change in code commits for each protocol over the past year.



Change in code updates

The percentage change in line-by-line edits for each protocol over the past year.



Best Growth

Theta (+931%) and Cardano (+580%)
saw the largest increases in code updates.



Greatest Declines

MakerDAO (-98%), Tron (-96%) and EOS (-94%) saw the largest declines in code updates.

Commits (Top graph) Code Updates (Bottom Graph)



Active Developers

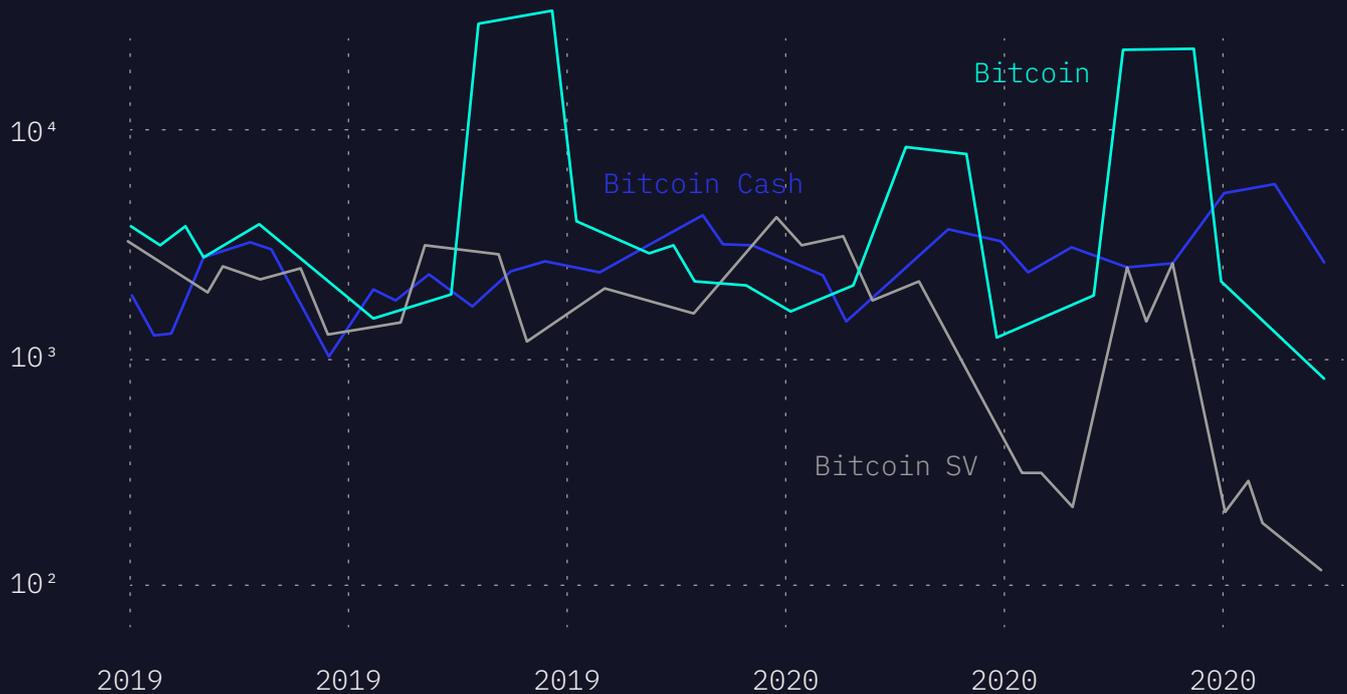
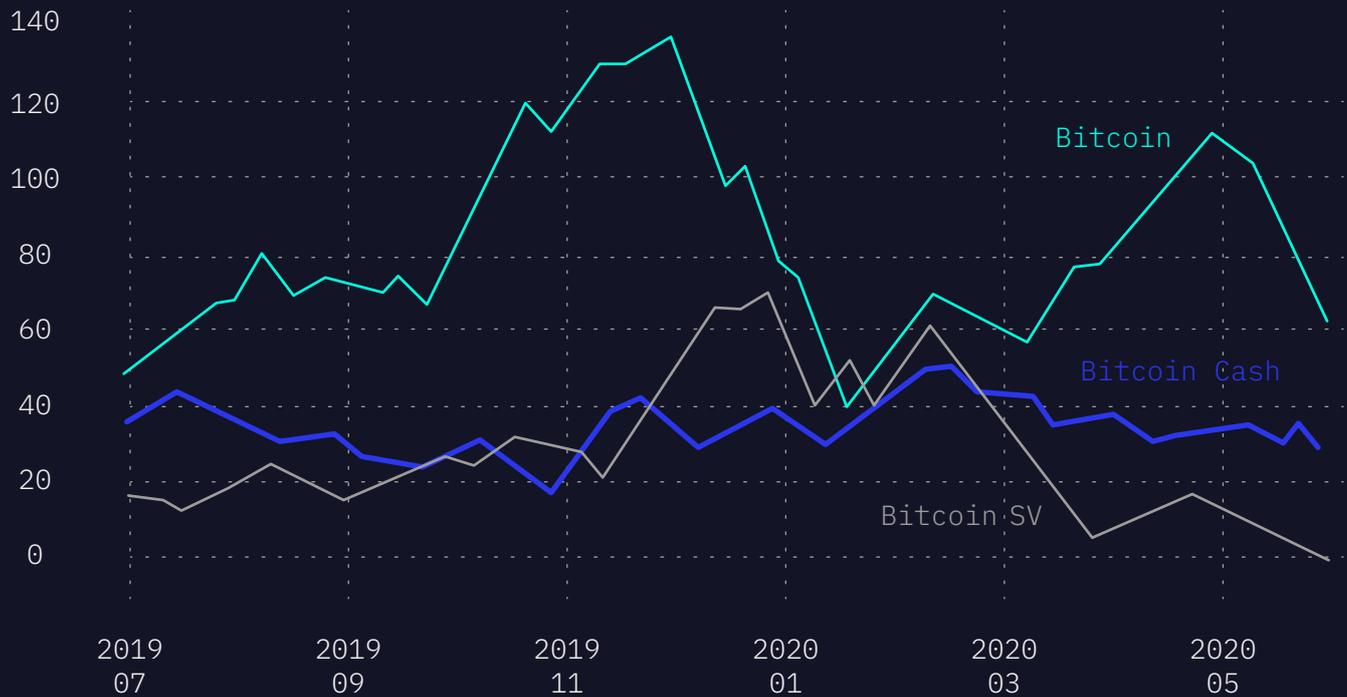
 MAKER's drop may be attributed to high development activity around the launch of **multi-collateral DAI** toward the end of 2019 and a failure to retain this momentum after the holiday season. Given  MAKER's dominance in DeFi collateralization (see **Further Reading**), this trend is likely to reverse.

The decline in  EOS may be attributed to falling interest following the 2019 launch of its main network and **core developers moving away** from the protocol.  TRON's decline may be due to negative price action.

A tale of three Bitcoins

While Bitcoin and Bitcoin Cash retained core development, Bitcoin SV's is in decline.

Commits (Top graph) **Code Updates** (Bottom Graph)



Notably, while Bitcoin's commit count is higher than that of Bitcoin Cash, both have similar code updates

Each commit to Bitcoin Cash generally contains more code changes than commits to Bitcoin

DAPPS

A measurement of the **share of smart contracts**, dapps and **active users per protocol**.

Blockchain data as measured by **stateofthedapps.com** has been analysed and segmented by each of the aforementioned categories.

ethereum dominates in its share of smart contracts (79%) and Dapps (82%).

 EOS (9% / 9%) and Steem (3% / 2%) are a distant second and third. Given the high likelihood of the introduction of smart contract runtimes on the **COSMOS** and *Polkadot* main networks, each of these protocols is likely to secure a significant share of smart contracts and dapps in the future. However, they are unlikely to dethrone ethereum in the near future given its substantial lead and first mover advantage.

Daily active dapp users is a more competitive category, though **ethereum (32k)** boasts more than double its closest competitor



EOS (14k).

Future trends in daily active users are difficult to predict, though  **EOS** and  **TRON's** fall in developer activity and core development may be reflected in active user numbers. As above, **COSMOS** and *Polkadot* are likely to rise quickly in the daily active dapp user rankings following the introduction of smart contract runtimes on their networks.

<DAPPS

/Executive Summary>

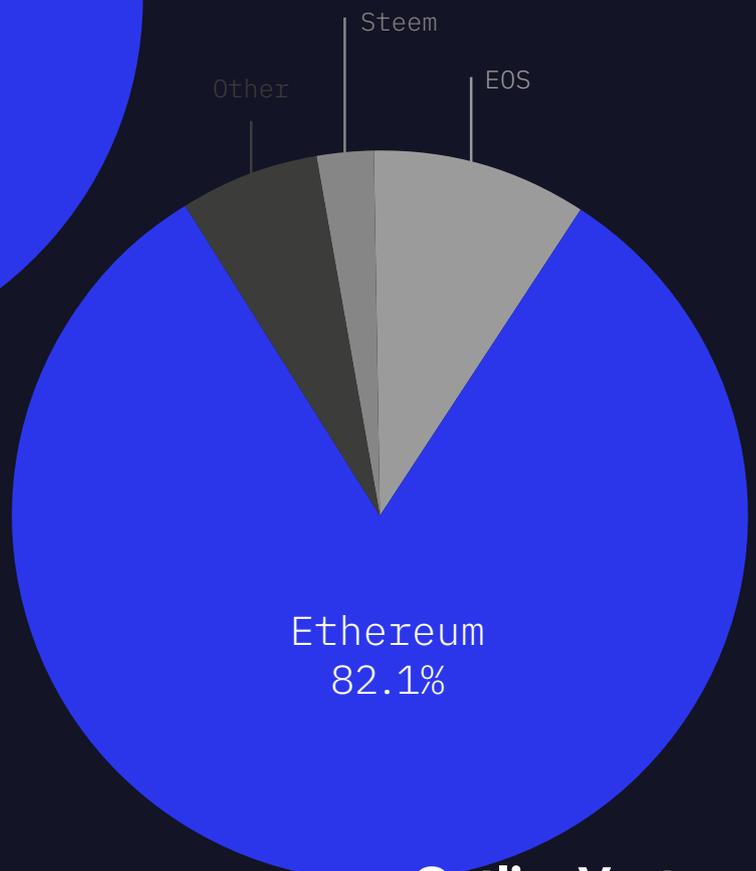
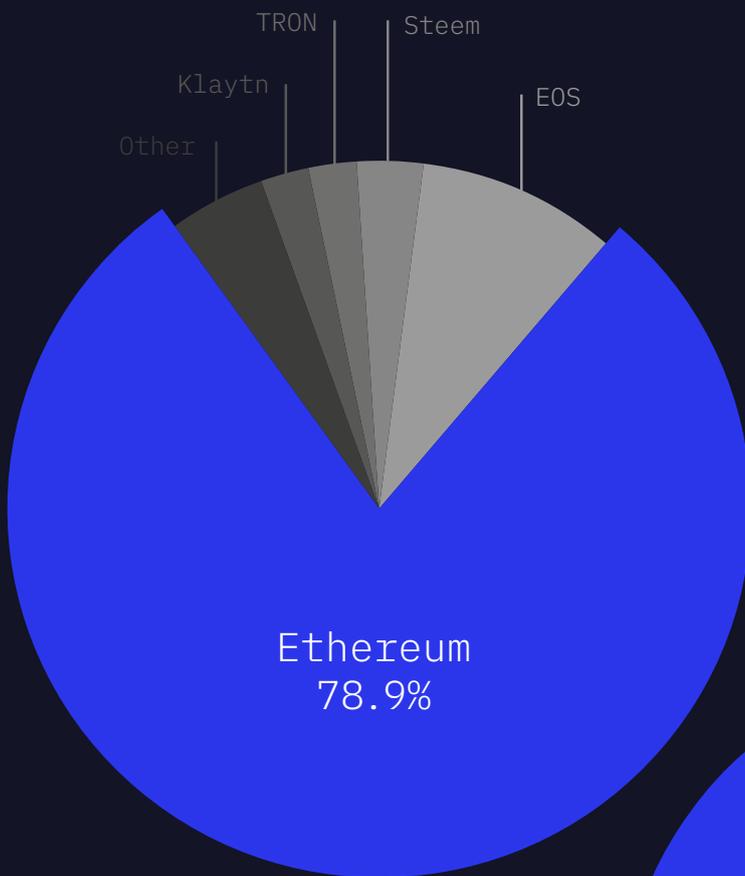
Recent entrant  **Klaytn** has quickly secured a top 5 spot in its share of smart contracts, its share of dapps and in daily active dapp users.

The reason for  **Klaytn** 's rise in apparent popularity is difficult to determine, particularly given modest external interest in the platform code. Historically, such a situation would suggest artificial transaction inflation, see **COINMETRICS** literature.

Should this be the case,  **Klaytn** 's share of smart contracts and Dapps is likely to decline.

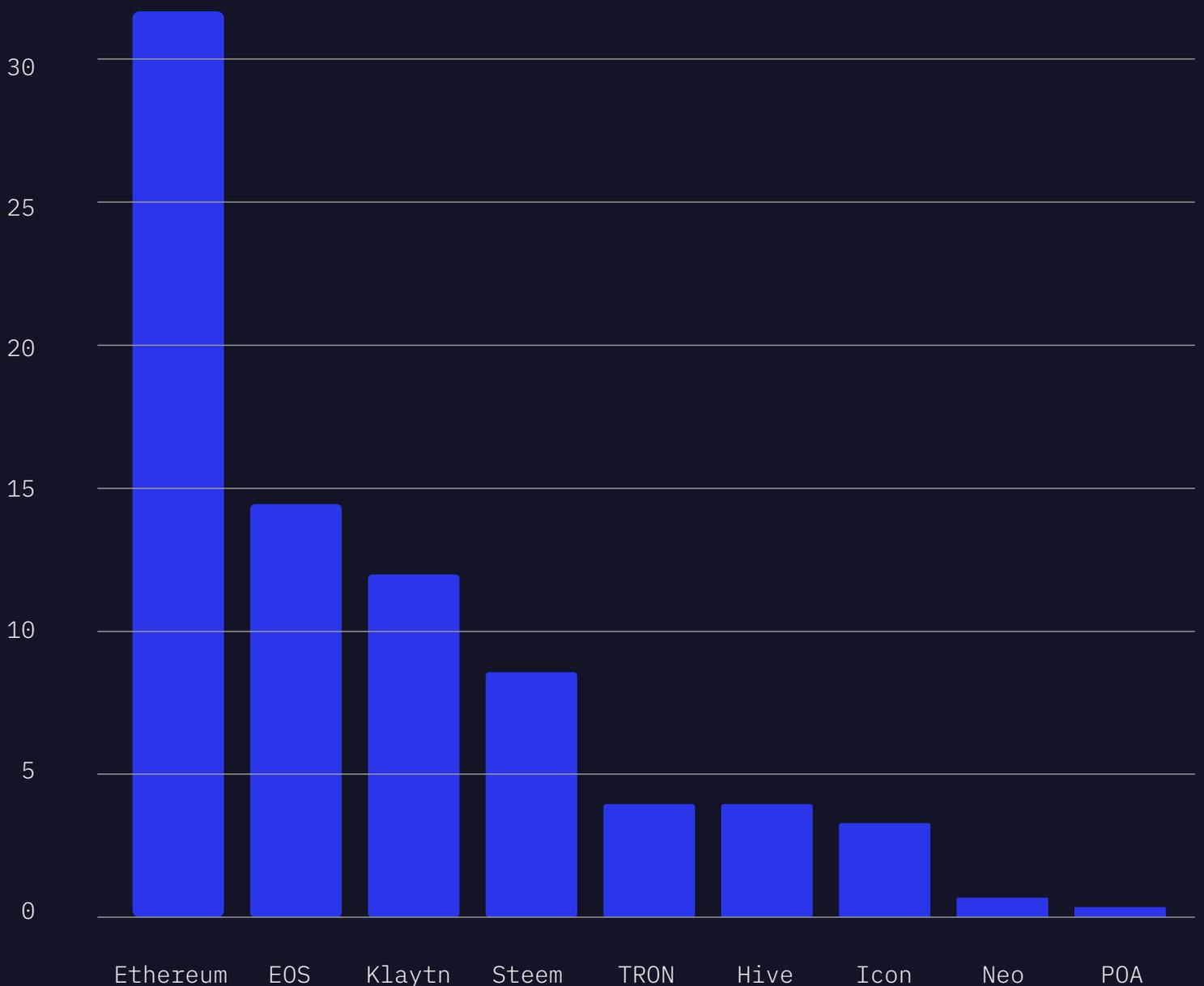
Share of smart contracts and Dapps

Share of smart contracts (left) and Dapps (right). External data source: stateofthedapps.com. Recent entrant Klaytn has secured a top-5 spot in both share of total smart contracts and dapps.



Daily active users of Dapps

Daily users of apps on each platform (not total platform users). External data source: stateofthedapps.com.

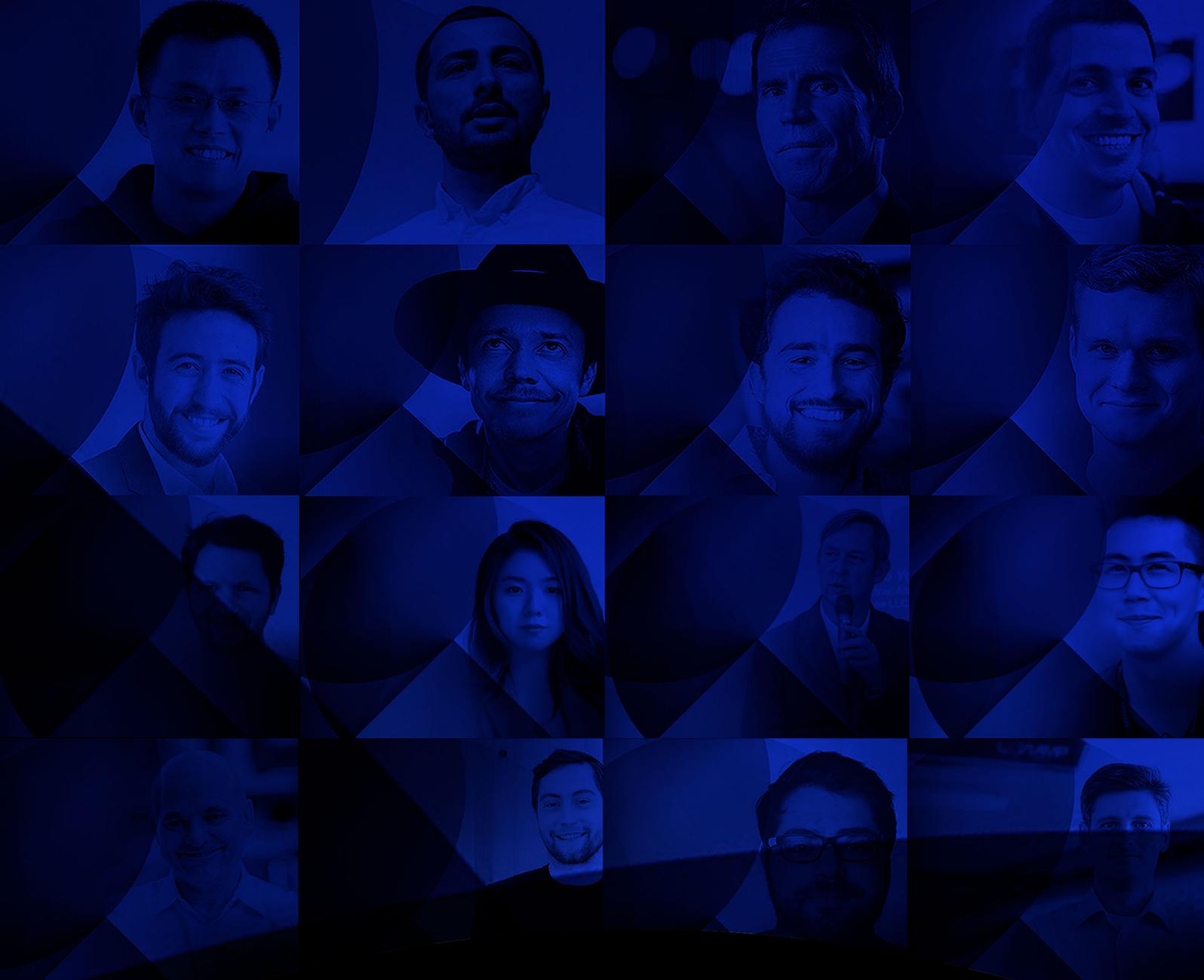


Further reading for 2020

98% of blockchain developers work with Ethereum in some capacity: [Embark Labs Developer Survey 2020](#)

Deloitte reports blockchain's viable platforms as "VeChain, Corda, Hyperledger, and Ethereum": [Deloitte Blockchain Trends Report 2020](#)

MakerDAO accounts for almost 90% of collateral lockup in DeFi, but Uniswap leads in active users: [Alethio Analytics Ethereum Decentralized Finance Report 2020](#)



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