



The Meta Blockchain



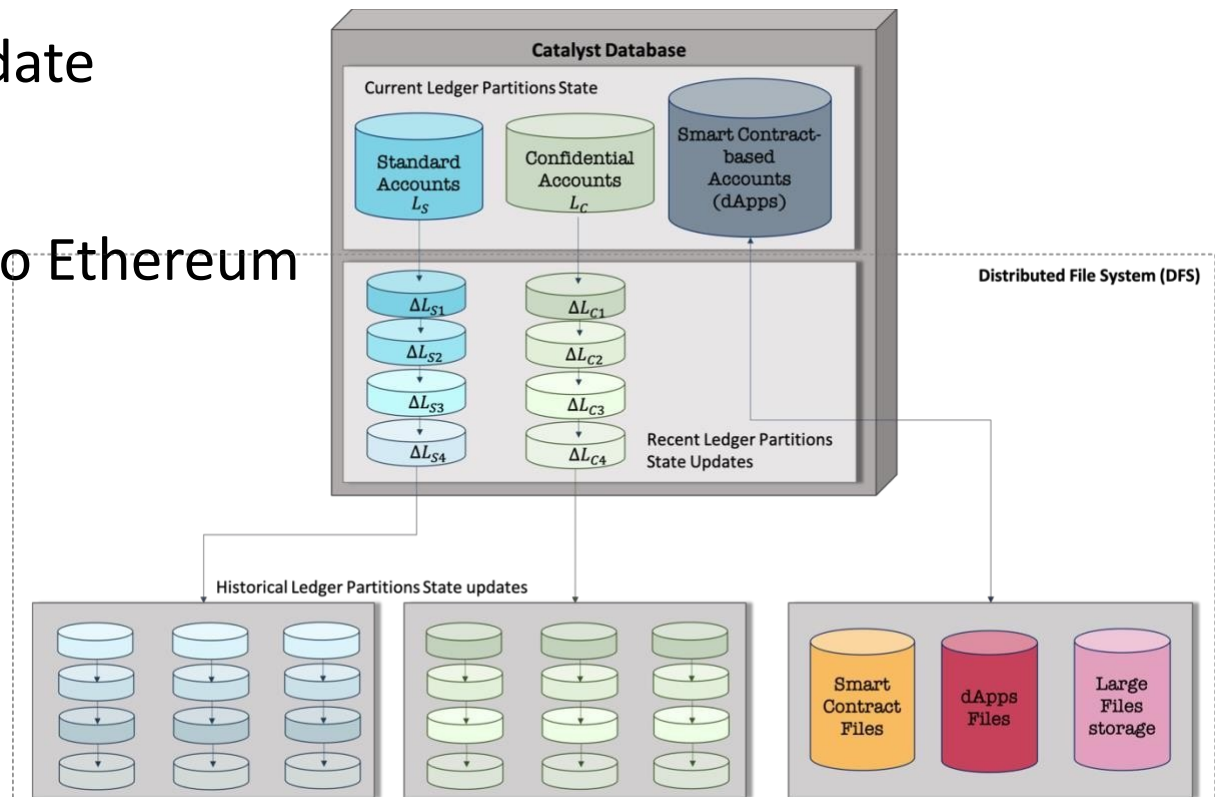
Catalyst – History

Build

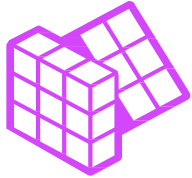
- Formed in the summer of 2018
- \$5 million privately invested in research and development to date
- Modular code base developed in .NET
- Contributions from Nethermind, and some code ported back to Ethereum
- 16 code contributors

Outreach

- Awareness within the .NET Foundation
- Commercial projects pitched to Catalyst to build on Catalyst
- Presented workshops at Blockchain Live for building a Twitter clone on Catalyst
- Featured in workshops at the London Stock Exchange, in Great British Businesses by the Telegraph and more (appendix for links)

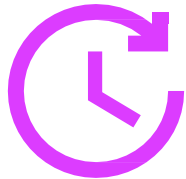


4 industry challenges



Blockchains are not fair

Satoshi Nakamoto created bitcoin to decentralise control and value. Today's blockchains are recentralising control and value.



Systems need data

Modern apps and systems depend on many types of data including databases, images, video, AI model data and more.



Engineering needs Tools, Patterns & Developers

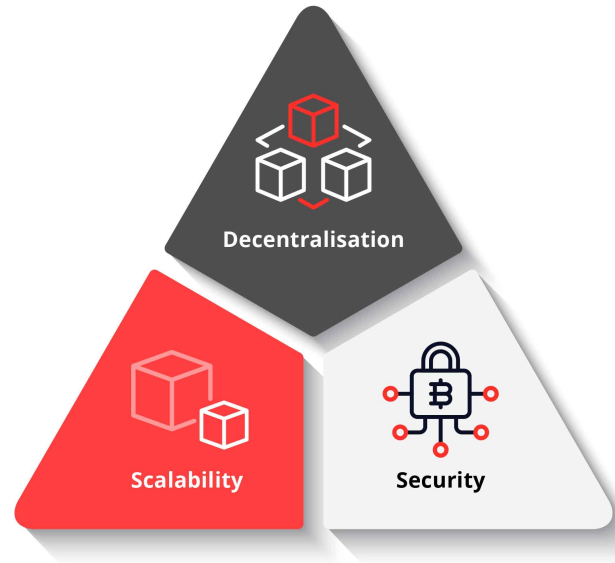
Modern software is developed using professional engineering software, integrated into diverse third-party software systems.



No one size fits all

Innovation needs flexibility and that comes from building modular technology that builders can adapt to their own needs

Catalyst – Mission driven

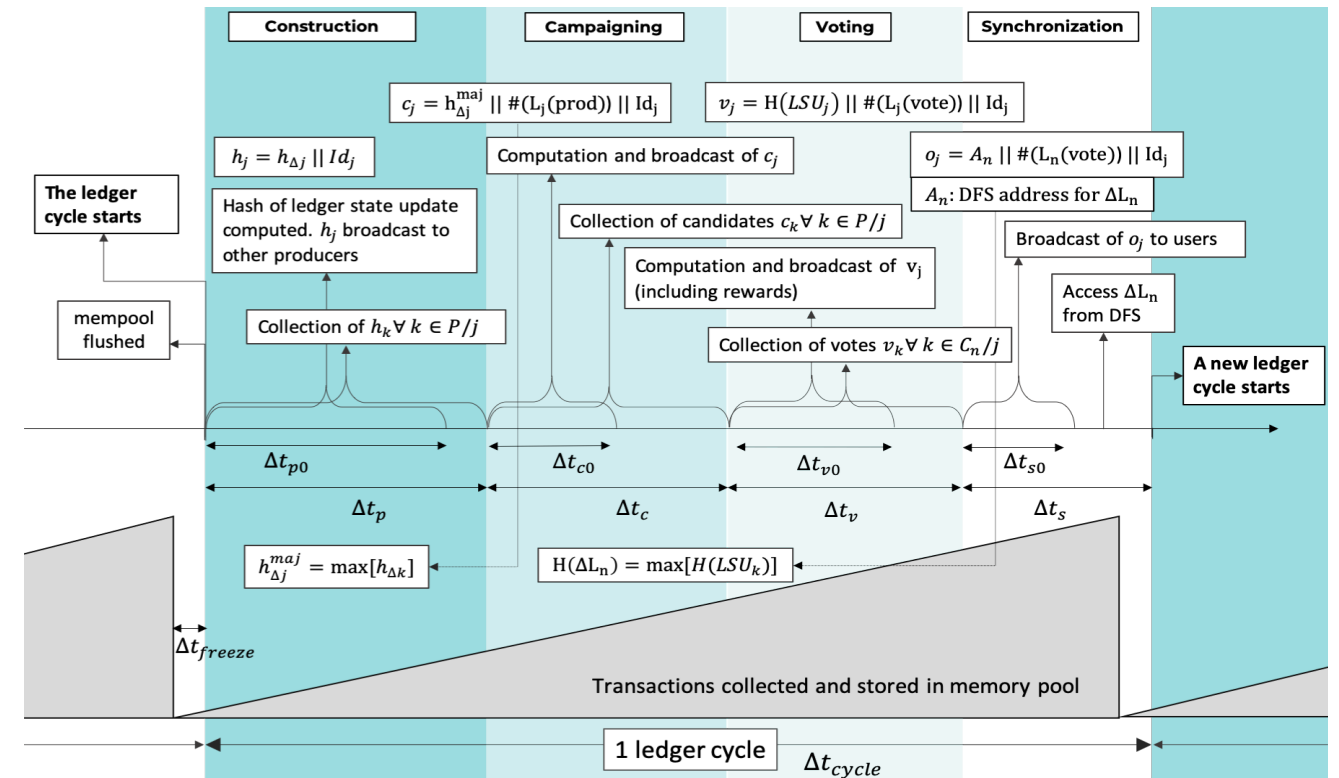


Blockchain Trilemma - Recentralising

- EVM blockchains compromise on decentralisation for scalability
- PoS and farms centralise control and value flow
- Benefits flow to minority

Catalyst

- \$5 million invested into consensus research
- Consensus mechanism decentralises as it scales
- Shares value fairly by contribution to network
- Value flows broadly with low barriers to entry



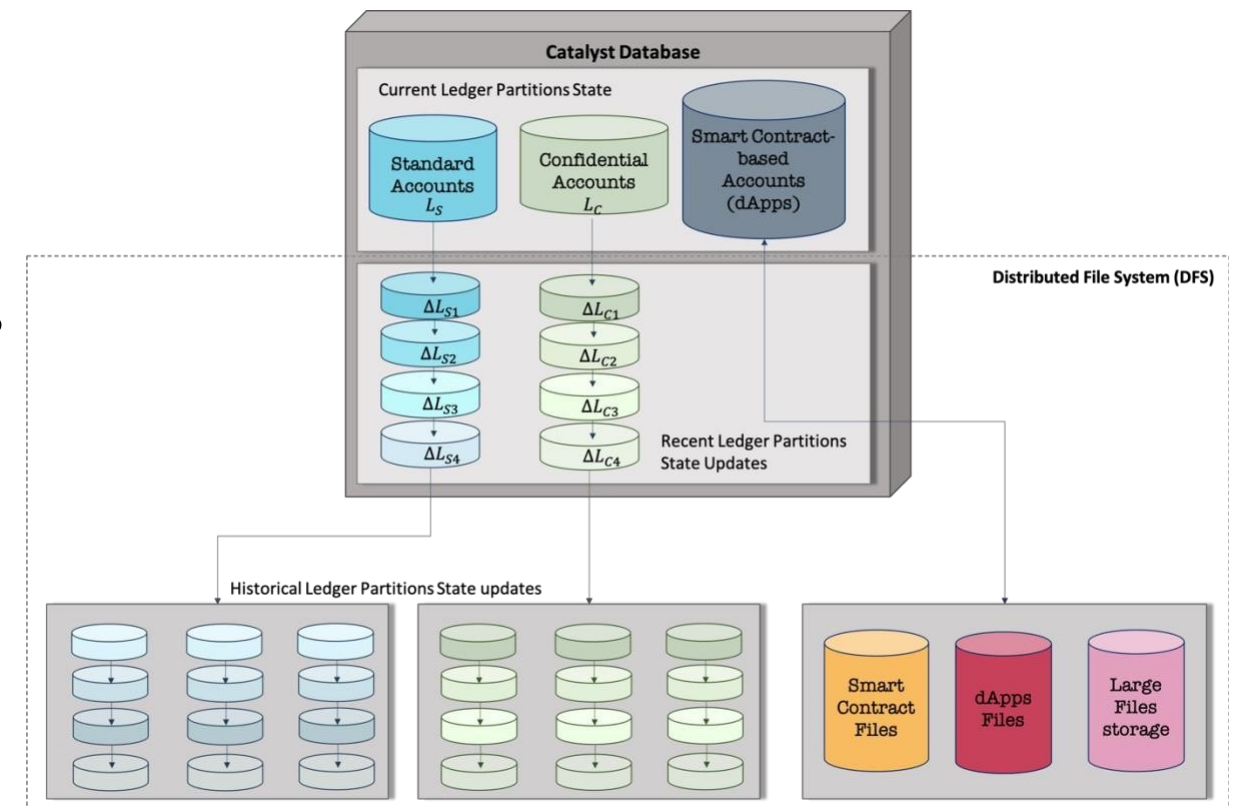
Catalyst – Systems need data

Current state

- Blockchains maintain a ledger with a log of changes, stored in a chain of blocks.
- Large files bloat the ledger and kills performance, so are priced off the ledger.
- NFTs and other files are stored off-chain, making those files unreachable and unreliable.

Catalyst

- Maintains both a ledger and distributed file store
- File hashes stored on chain for reliable cryptographic proofs
- Files stored in distributed file store
- No cost impact to ledger while supporting large files
- Access to file storage from EVM



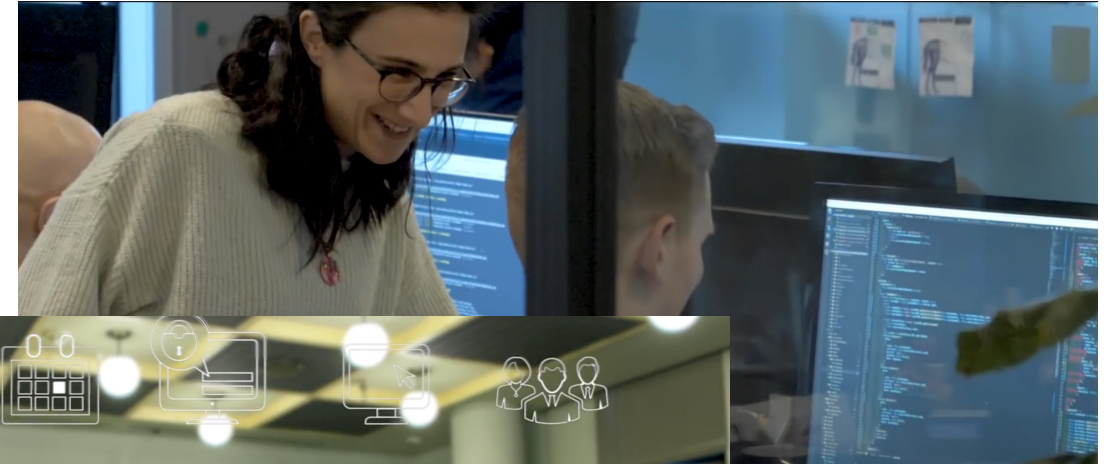
Catalyst – Engineering tools & patterns

Current state

- Blockchain tooling often not as professional as cloud, mobile and desktop tooling
- Forces builders to work differently when using blockchain, such as lack of API and Service Bus
- Hard to integrate, hard to adapt to, hard for builders outside of blockchain

Catalyst

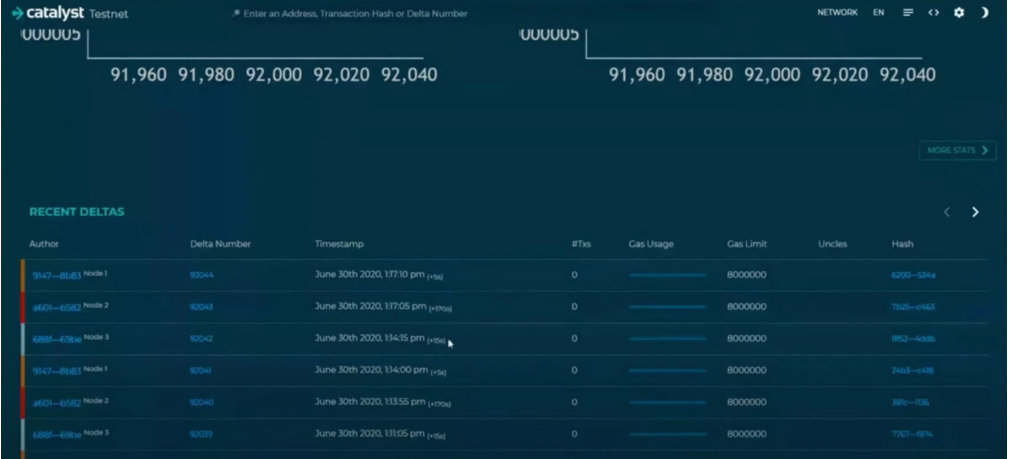
- Extensions for Visual Studio Code and other IDEs
- Integrated service bus to notify builders of events for easy real time integration
- Mission to build debuggers and better tooling
- Vision for more SDKs and API services



Catalyst – Engineering tools & patterns

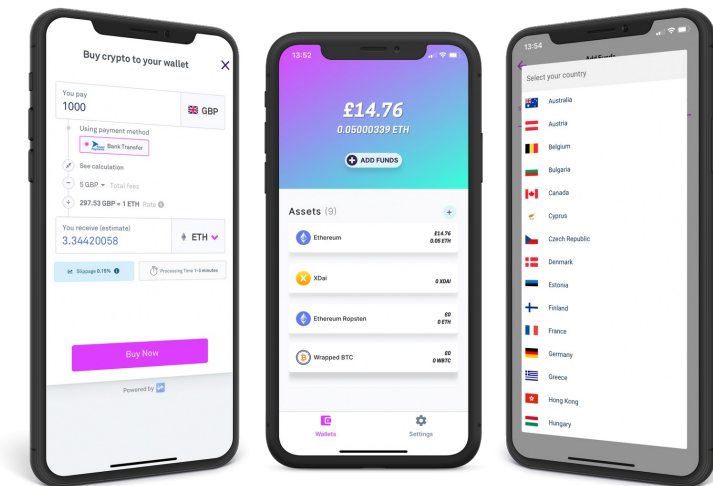
Some of what's been developed for Catalyst to date:

- Website
- SDK for targeting Catalyst
- Blockchain explore
- Network visualiser
- Whitepaper
- Tx testing tool
- Catalyst mobile and web wallet
- 2x VSCode smart contract extensions
- Python based testing toolkit
- Cipher benchmarking toolkit
- Token sale contract written
- Various demo dapps built

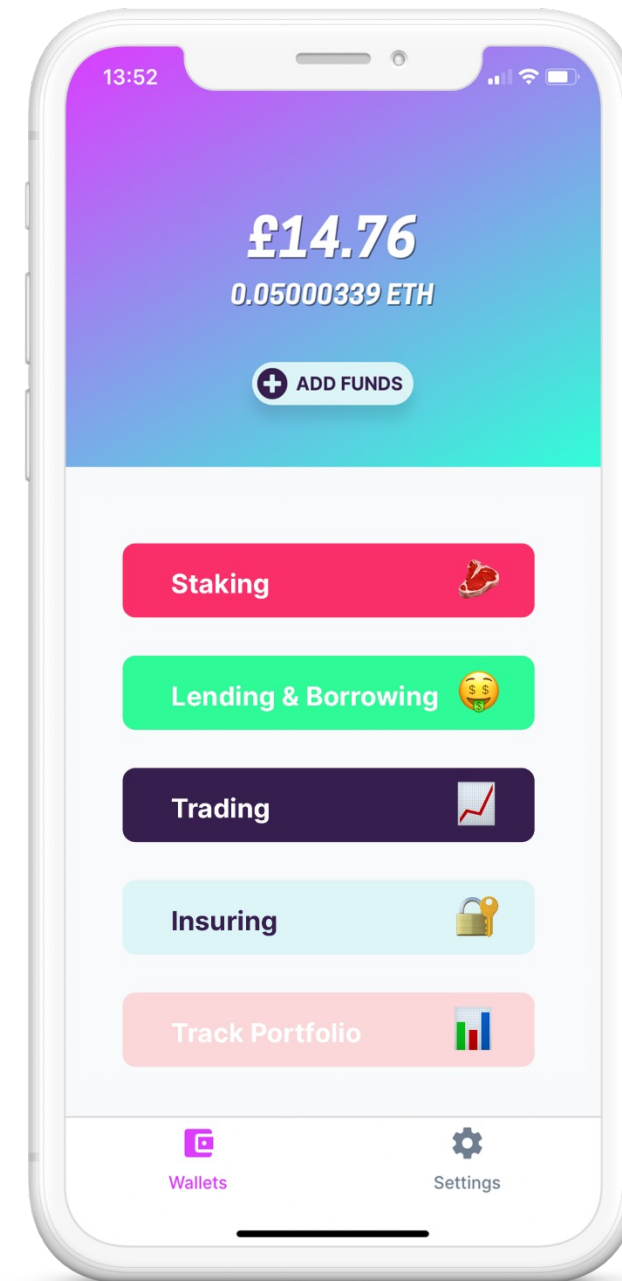


The screenshot shows the Catalyst Testnet interface. At the top, there's a search bar with the placeholder text "Enter an Address, Transaction Hash or Delta Number". Below the search bar, there are two sets of "UUUUUU" characters and a range of numbers: "91,960 91,980 92,000 92,020 92,040". Below this, there's a "RECENT DELTAS" section with a table of transaction data.

Author	Delta Number	Timestamp	#Txs	Gas Usage	Gas Limit	Uncles	Hash
0x47...0x81 Node 1	92044	June 30th 2020, 17:10 pm (+5s)	0	████████████████████	8000000		6205...044a
0x01...0x82 Node 2	92043	June 30th 2020, 17:05 pm (+7ms)	0	████████████████████	8000000		7625...0403
0x87...0x8a Node 3	92042	June 30th 2020, 14:45 pm (+15s)	0	████████████████████	8000000		882...04ab
0x47...0x81 Node 1	92041	June 30th 2020, 14:00 pm (+5s)	0	████████████████████	8000000		2043...0418
0x01...0x82 Node 2	92040	June 30th 2020, 13:55 pm (+7ms)	0	████████████████████	8000000		386...036
0x87...0x8a Node 3	92039	June 30th 2020, 13:05 pm (+5s)	0	████████████████████	8000000		7707...031a



All of DeFi in one app



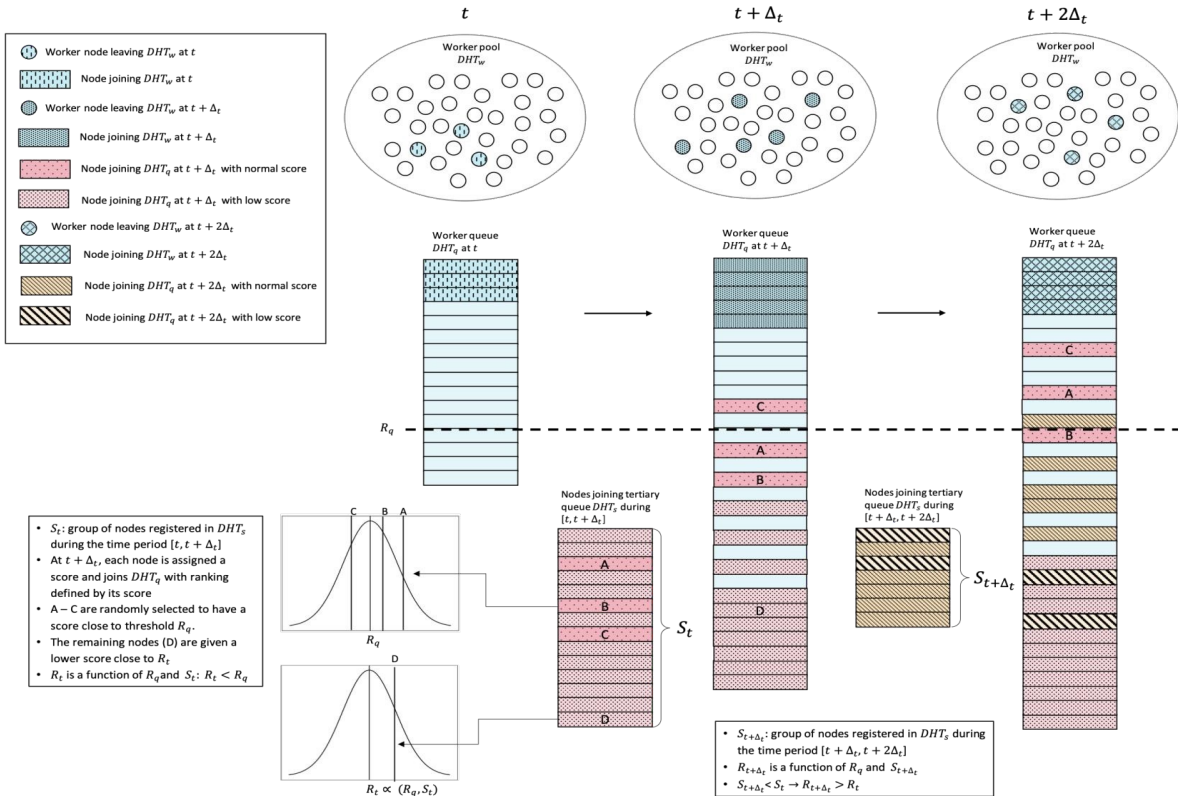
Catalyst – No one size fits all

Current state

- Blockchains tend to bind the ledger tightly to a single runtime environment (i.e. EVM, SVM etc)
- Monolithic code bases so hard to adapt or extend
- Ethereum now recognises and embraces benefit of a modular architecture

Catalyst

- Was modular from inception in the summer of 2018
- Interfaces that modules plug into
- 18+ modules today
- 33 repositories
- Over 110,000 lines of code in one repository alone



Market size

Future

- Network growth
- Deploy Symmetric, Cent Wallet
- Attract EVM projects to network
 - Rollout bridges
 - Add additional runtimes
- Focus heavily on engineering roadmap

Post funding

- Complete consensus development
- Launch test networks
- Launch main network

Current

- Initial code base
 - Tooling
- Updating to latest EVM & .NET standards
- Research phase 1 complete

Competition

						
Fast ledger	No	Yes	No	Yes	Yes	Yes
Integrated file system	No	No	No	Yes	No	No
Modular	Yes	No	No	Yes	No	No
Low-cost usage	No	Yes	No	Yes	Yes	Yes
Low compute entry	No	No	No	Yes	Partial	No
Large community	Yes	Yes	Yes	No	Yes	Yes
Large market cap	Yes	Yes	Yes	No	Yes	Yes

Founder



Darren Oliveiro-Priestnall Chief Technology Officer

Original creator of Catalyst

Founder of Atlas City

Founder of Symmetric DeFi and DAO

Founder of Cent Finance

Tech Lead for Britain's sixth fastest growing privately held company (tech business)

Raised \$5 million privately to build original Catalyst R&D stack

25 years of Software Engineering

9 years of Blockchain Experience

Contributor to multiple successful blockchain projects as founder, leader or senior

Certified Network Defense Architect

Certified Blockchain Professional

Road ahead

Update Catalyst to .NET 8

Update Catalyst to latest EVM level

Begin fund raising

Update R&D plans

Q1 2024



2024

Fund raise

Hire small tech team

Update/complete Catalyst core

Complete Alpha of new consensus

Launch test networks

Complete new consensus

Launch main network

Token sale to boost economy

H1 2025



Future

Grow ecosystem

Further engineering inc:
- Add more runtime environments and languages
- More tooling & integration
- Bridging to other networks
- Scale out network

Our mission at Catalyst is to return to the founding principles of Satoshi Nakamoto and put the decentralization back into blockchain.

Decentralise control, ownership and value flow while building the most integrated and rewarding developer experience in the industry.

Thank You.



Appendix

- Website: <https://catalystnet.org/>
- Introduction paper: <https://catalystnet.org/media/IntroductionToCatalystNetwork.pdf>
- Consensus paper: <https://catalystnet.org/media/CatalystConsensusPaper.pdf>
- Security considerations:
<https://catalystnet.org/media/CatalystNetworkSecurityConsiderations.pdf>
- API documentation: <https://catalyst-network.github.io/Catalyst/api/>
- Telegraph newspaper: <https://youtu.be/94YwJzMkIKQ?si=m9dGczbKzbzVjBsL>
- London stock exchange: <https://player.vimeo.com/video/372383787>
- Vision video: <https://www.youtube.com/watch?v=UQsM3GMNK0o>
- YouTube: <https://www.youtube.com/@CatalystBlockchain>
- Blockchain Live: <https://www.prnewswire.com/news-releases/catalyst-network-gets-green-light-at-blockchain-live-300925002.html>
- Swiss review: https://www.swissinfo.ch/eng/business/swiss-magnet_crypto-foundations-continue-to-thrive-in-switzerland/45100304

Appendix

- GitHub: <https://github.com/catalyst-network>
- Discord: <https://discord.com/invite/3JmXRXv>
- Medium: <https://medium.com/catalystprotocol>
- Twitter: <https://twitter.com/CatalystProt>
- Facebook: <https://www.facebook.com/catalystnetorg/>
- LinkedIn: <https://www.linkedin.com/company/catalyst-network>