

# ICO Review: Chromapolis (CHROMA)

Database-Centric dApp Platform

August 12, 2018



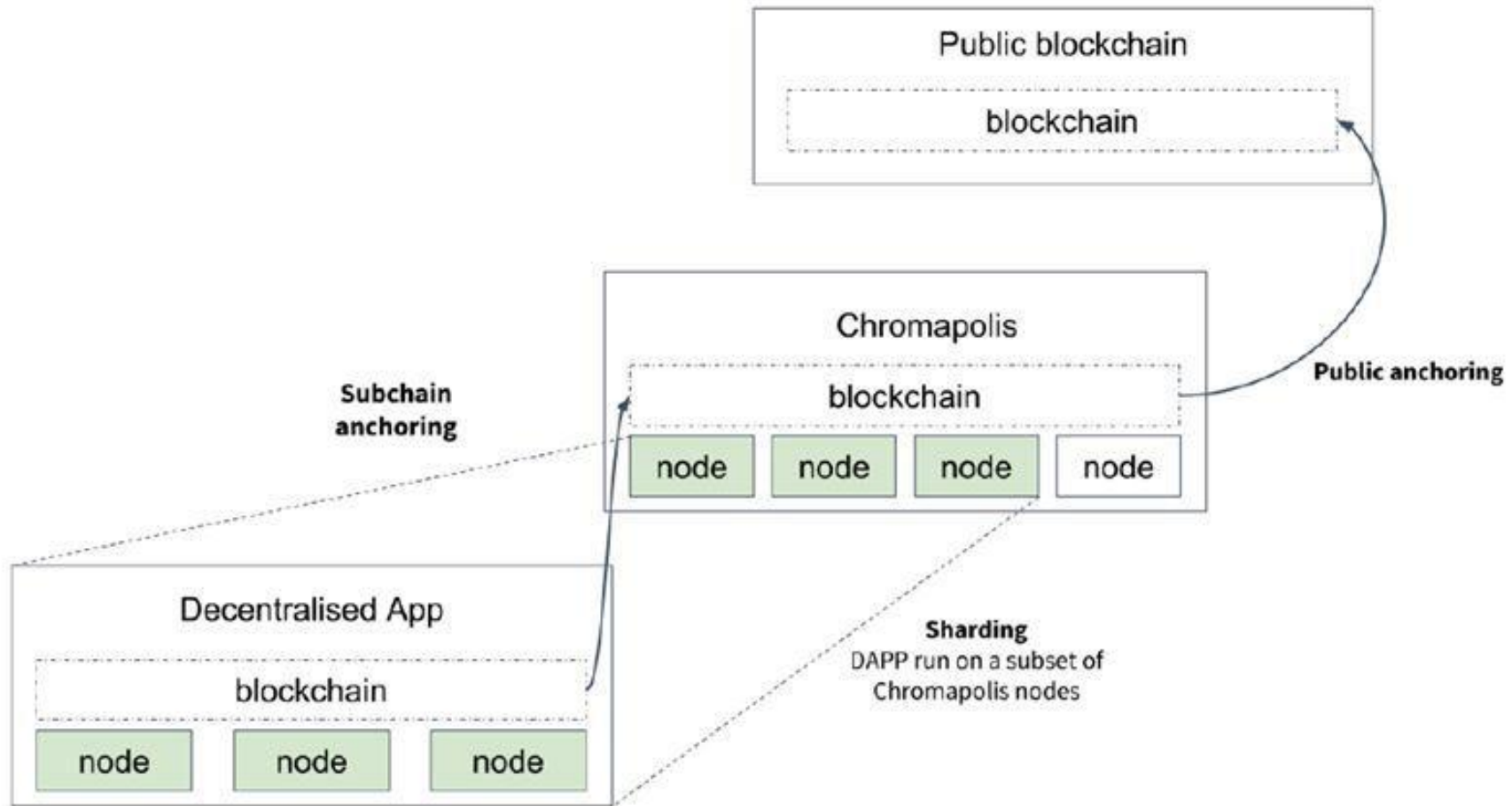
# What is Chromapolis?

- Chromapolis is a blockchain platform for decentralized applications (dApps) where blockchain data is stored in a relational database.
- It is designed to solve the issues facing current dApp platforms (e.g. Ethereum) such as high fees, poor user and developer experience, and lack of security that ultimately inhibit the scalability of these platforms.
- Chromapolis aims to differentiate itself from other dApp platforms by introducing an innovative fee structure. Because dApps are not built as smart contracts (as they are in Ethereum, for example), users do not need to pay transaction fees for using Chromapolis.
- Instead, dApp developers have discretion in deciding their own policy of charging users for each specific application (e.g. freemium, subscription, subsidized, in-app, etc.).

# Key features

- **Relational database:** Chromapolis will have a full-stack decentralized development platform where blockchain data will be stored in a relational database. DApps can quickly retrieve information and perform complex queries without loss of performance.
- **Horizontal scaling:** Each dApp will have its own or multiple blockchains with expected speeds of over 500 TPS per sidechain. Total throughput can be increased by adding more nodes/chains.
- **Hybrid consensus:** Chromapolis will be using Practical Byzantine Fault Tolerance (PBFT), staking and anchoring to enable transactions to be confirmed within seconds.
- **Unique, flexible language:** Rell is a proprietary language built for Chromapolis which is designed to be easy for programmers to learn and reduces programming errors. According to the team, Rell is up to 7x more compact than pure SQL and is easier to use.

# How it works



# ChromaWay – the parent company

- Chromapolis is being developed by ChromaWay, a blockchain technology company based in Sweden established in 2014. ChromaWay has been building various blockchain apps on their platform, with a focus on the real estate and finance sectors.
- Some of their projects include:
  - **SofiWay:** A blockchain-based network for immediate settlement of payment directly between individuals. It is designed to support E-krona, an e-currency project created by the Swedish Central Bank.
  - **Universal Identity Hub:** A blockchain solution for United Nations Women that enables the collection of critical individual data on land claims, health records, education attainment, etc.
  - **Green Assets Wallet:** A blockchain platform for green investments claims and reporting. It is funded and co-developed by the Emerging Markets Dialogue on Finance, a project commissioned by the German Federal Ministry for Economic Cooperation and Development.



# ChromaWay – the parent company (continued)

- Chromapolis will be implemented on top of ChromaWay's existing Postchain framework, a blockchain-based consortium database based on SQL. Postchain is currently being used by the Swedish Land Registry.
- Initial tests have shown that Postchain has demonstrated it can meet and exceed 500 transactions per second per sidechain and 100,000 updates and reads per second, with confirmation times of approximately 1 second.



POSTCHAIN

## POSTCHAIN - THE FIRST CONSORTIUM DATABASE

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Databases are at the heart of enterprises. Now blockchain is a proposed alternative, a new kind of secure shared infrastructure. While both blockchains and databases support read and write, mature database systems offer sophisticated features for working with data that have been refined over years of development. A new architecture, the consortium database, combines the power and flexibility of mature database systems with the secure collaboration and disruptive potential of blockchain. The consortium database represents the convergent future of enterprise blockchain and database systems. Postchain is the first implementation of a consortium database, and it makes the market leading relational database systems into consortium database.

## CONSORTIUM DATABASES: THE BEST OF BOTH WORLDS

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A consortium database is just as good at managing data as a database, and just as good at being a secure distributed ledger as a blockchain. It is a better, more secure and less centralized database. It is a more mature blockchain with advanced and powerful features for managing validation and integrity, data independence, and the other great features that have made relational databases so ubiquitous.

# Development roadmap

## 2H18

Sep – Chromapolis testnet is released.

Oct – Chromapolis MVP is released: Rell compiler, JavaScript SDK, tokens, sidechains, BFT + anchoring consensus, dApp provisioning.

Dec – Developer tools: Chromapolis IDE, ETH Gateway, Unity SDK, in-memory database, Rell-optimized runtime.



## 1H19

Feb – Chromapolis v1.0: Decentralized governance, support for business applications, custom DB implementation.



## 2H19

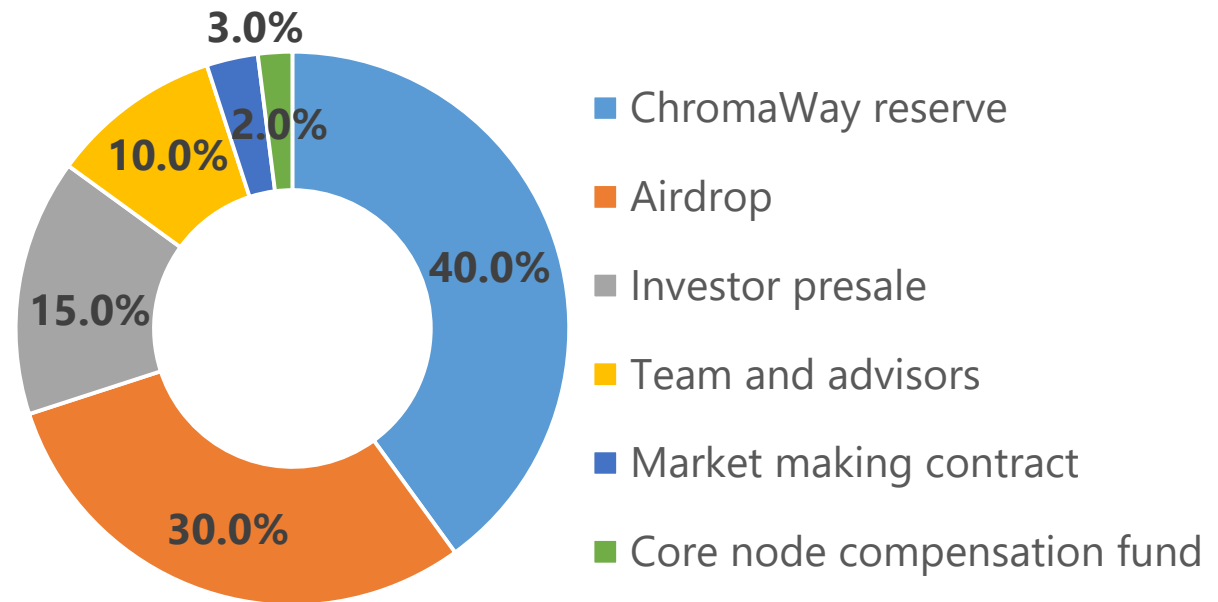
Jul – Chromapolis v1.1: dApp marketplace, dApp templates, parallel processing, automatic sharding.

# CHROMA token sale summary

## ICO SUMMARY

- **Project name:** Chromapolis
- **Token symbol:** CHROMA
- **Website:** <https://chromaway.com> (website of the parent company ChromaWay, website for Chromapolis coming soon)
- **Hard cap:** US\$15M
- **Conversion rate / bonus structure:** TBA
- **Max market cap at ICO (fully diluted basis):** US\$100M
- **Private sale / white list:** TBA
- **ERC20 token:** Yes (will be switched to native tokens when the mainnet is launched)
- **Countries excluded:** TBA
- **Timeline:** Unconfirmed whether the project will have a public crowdsale at the moment
- **Token distribution date:** October 2018

## TOKEN DISTRIBUTION





# Use of CHROMA tokens

- The Chroma token is the platform's native token and is used to incentivize various users of the platform.
  - **Providers:** Own nodes which produce blocks and host dApps. Providers need to stake Chroma tokens to incentivize good node behavior; staked tokens are locked and thus constrain the circulating token supply. As dApps require computational resources and storage, providers will be compensated by developers for hosting their dApps.
  - **Application developers:** Pay hosting fees to nodes and collect income from users for using the dApps that they create (developers decide their own fee policies). DApp native tokens can also be backed automatically by Chroma tokens which should help provide liquidity and create demand for dApp-specific tokens.
  - **Users:** Pay in-app, transaction or subscription fees to use various dApps on the platform.

# Use of CHROMA tokens (continued)

- Chroma tokens should appreciate in value as more providers join the network since more tokens will be staked/locked, thus temporarily taken out of the circulating supply.
- Initially, ChromaWay will be selecting a small group of providers (according to the whitepaper, there will be at least 12 providers). Eventually, providers will be able to vote for new providers and ChromaWay will no longer need to be the gatekeeper. The platform is designed to scale to thousands of nodes.
- Chroma tokens should also appreciate in value as more participants join and use the network which is in turn driven by factors such as cost of using node resources, the number and type of dApps hosted on the network, confirmation times and processing speed, security, etc.

## THE TEAM

# Team and advisors



**Henrik Hjelte**

CEO

A serial entrepreneur with more than 25 years of experience. He is the current CEO and co-founder of ChromaWay and the CEO and founder of stix.to. He was one of the creators of ChromaWallet, an open-source colored coin wallet. He obtained his Master's degree in Business Administration and Economics from Uppsala University in 1996.



**Alex Mizrahi**

CTO

Over 20 years of experience with expertise in programming, colored coins implementation for Bitcoin, smart property and distributed contracts applications. He is the current CTO and co-founder of ChromaWay where he led the development of ChromaWallet, ChromaNode, etc. Prior to ChromaWay, he headed the Colored Coin project. He obtained his Master's degree in Applied Mathematics from Donetsk National University in 2005.



**Or Perelman**

COO

Over 10 years of experience with expertise in patents, internal, IP, and open-source law. He is the COO and co-founder of ChromaWay where he was involved in creating ChromaWallet with Henrik Hjelte and Alex Mizrahi. He obtained his LLB from Netanya Academic College in 2014.

# The opportunities

- The project has a strong team and advisors with well-known blockchain veterans. The team was involved in the colored coin project since 2013.
- With Chromapolis, dApp developers have the freedom to decide their own pricing models (e.g. freemium, subscription, subsidized, in-app, etc.) which better caters to different uses cases. This provides more flexibility and better user experience than most competing blockchain protocols, which are set to only one payment model.
- Chromapolis is unique among competing blockchain protocols in that it uses a relational model where data can be easily accessed without loss of performance. As the platform is database-centric, it could be better suited for data-intensive applications.

# The opportunities (continued)

- Chromapolis uses horizontal scaling where each dApp has its own or multiple blockchains with speeds expected to be over 500 TPS per sidechain. Anyone interested in running a node can choose which dApps they are interested in and sync only the corresponding blockchain data.
- Chromapolis is not built from scratch. It is being developed by a company with a track record in the blockchain space and it is based on the Postchain framework, blockchain-based consortium database which is currently being used by the Swedish Land Registry.



# Our concerns

- Initially there will be only a few providers/nodes which will be selected by ChromaWay, so it will actually begin as a fairly centralized development and governance model. Eventually, existing providers will be able to vote for new providers. The goal is to have thousands of providers but it is uncertain how long this will take.
- There is no alpha, GitHub or MVP available yet. The testnet is scheduled for release in September 2018 and the MVP (mainnet) will follow in October 2018.

## For flipping: **A.**

- Chromapolis is probably the project with the highest market awareness right now. The hard cap of \$15 million is reasonable for this type of project, taking into account current ether price. Only 15% of tokens are sold, which is not optimal but it also provides incentive for the team to do well.
- The roadmap is fairly short, with the testnet coming out in a month and mainnet in two months.
- A fair amount of presale tokens are being unlocked at TGE, which brings the initial supply to a higher and more sustainable level, compared to some of the recent projects. This reduces the volatility of the tokens going forward during unlocking events.
- If the project were to conduct an ICO (unconfirmed right now), we believe there should be good demand for the tokens during and post ICO even during the current depressed market condition.

## For long-term holding: **A.**

- The team is experienced in the blockchain space, having worked on colored coin since 2013. In addition, they are well-connected within the blockchain development space and understand the pain points concerning developers.
- We believe the project brings something unique (relational database and flexible pricing mechanism) to the table which can be very valuable if the team can pull off what they promised.
- Therefore, we believe Chromapolis has a good chance to succeed in the long-run. We may review our rating once we see the features of testnet, which is scheduled to be released in September 2018.



***CrushCrypto***