Archethic

Digital sovereignty at your fingertips

CRYP2NOVA

Archethic
Public Blockchain

2024

Archived copy · cryp2nova.com

ABSTRACT

Imagine a technology that not only simplifies your daily activities but also safeguards your security.
What if you could engage in creating wealth through technological advancements while focusing on your primary skills, not just technological knowledge?
Archethic aims to democratize access to all forms of technology with just a simple touch. Our team has engineered a highly secure, tamper-proof system, rivaling the security of a bank card chip. This innovation allows you to bypass traditional passwords, keys, or other authentication methods, using a unique biometric solution based on your finger veins. Archethic's technology operates globally, free from any control or intervention by individuals, companies, or organizations. Rooted in open source, we've enhanced blockchain technology to substitute any application or service, facilitating universal access to a suite of features including financial autonomy, data sovereignty, immediate payments, freedom of expression, decentralized identity, fractional ownership, collective health insights, smart cities, and more.

To foster a decentralized, autonomous network controlled by people worldwide, Archethic incentivizes participants (miners) who maintain network servers. These individuals validate transactions on the Archethic Public Blockchain.
The ecosystem is underpinned by its native cryptocurrency, $UCO, created at the project's outset. This currency rewards development efforts, ensuring every contributor plays an integral role in the network's growth.
In an ever-changing world, your involvement is key to shaping the future of humanity through this groundbreaking technology.

Archived copy · cryp2nova.com

TABLE OF CONTENTS

01.
Vision

02.
Foundational Principles

03.
Archethic's Current Position

04.
Infrastructure Layer

05.
Trust Layer — Grail Of Mass Adoption

06.
Governance Layer — Community / Common Goods

07.
Archethic's Beating Heart : $UCO

CRYP2NOVA

Archived copy · cryp2nova.com

VISION

An almost unlimited market ...

Archethic unleashes a new generation of services moving away from the traditional Web2.0 silos supported by centralized models.

In the pre-historic model of the web (still prevalent since its origin), each new service recreates its elementary operating blocks each time: portal, customer identification, customer databases, service management, hosting, storage, backups, payments. Amazon, Facebook, Google, and others do not share anything, leading to:

- An appalling consumption of computational power
- An abundance of login/passwords for users who end up copying their passwords everywhere thus giving them away
- Risks of fraud or cyberattack that can shake the planet

Archethic finally rationalizes this operating model by directly integrating all the layers necessary for the creation of new services.

- Much less need for computer skills thanks to upstream integration
- Unique and universal identity, activated only by the holder, regardless of their physical or virtual location
- Removal of third parties in favor of the Blockchain to ensure the sustainability of the system
- Major economic and financial impact on the cost of each new service



"Archethic stands as a pioneering platform, offering integrated services to fulfill a crucial purpose: Empowering everyone with control over technology."

Sébastien Dupont
CEO – CoFounder

CRYP2NOVA

Archived copy · cryp2nova.com

... through unlimited Decentralized Services :

Programmable Fintech

Streamline banking processes, offer cost-effective transactions, and facilitate decentralized lending and crowdfunding platforms.

End-to-End E-Commerce

Website, inventory management, reservations, payments, loyalty programs, shipping: It has never been easier to create an e-commerce platform.

Communities and Organizations

Archethic replaces social media networks, LDAP which are prone to leaks and loss of control, with a simple address book and integrated messaging service.

Smart-Cities

From automatic access to a hotel room or a car in the street without a key, to the metro without a ticket. Finally, it is possible to have a fluid interaction with our environment leveraging IoT.

Healthcare

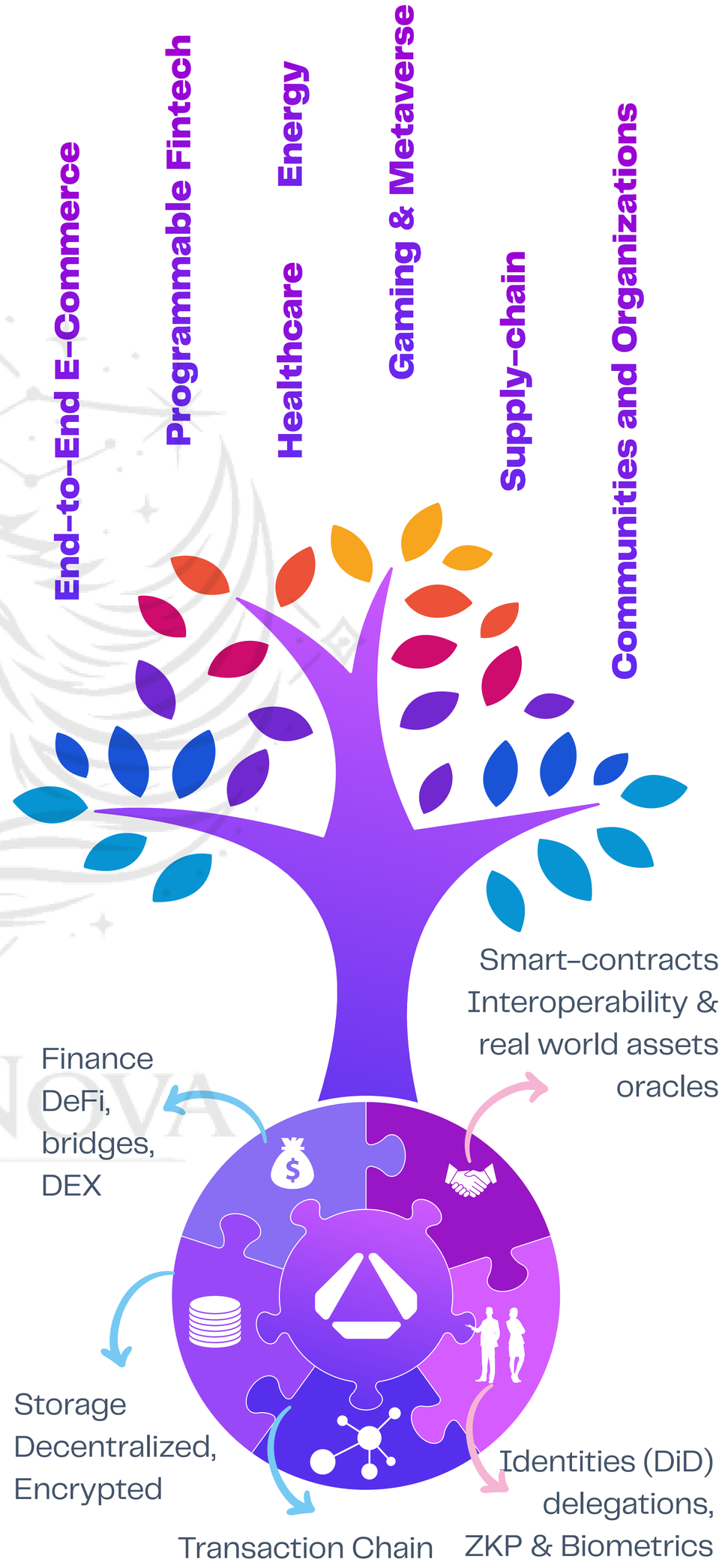
Improves patient data security, interoperability, and research capabilities, ensuring the authenticity and privacy of electronic health records.

Supply-chain

Enhances supply chain transparency, traceability, and efficiency, preventing counterfeiting and reducing fraud.

Gaming & Metaverse

Introduces new models of ownership and monetization in gaming, allowing the creation and trading of digital assets.



CRYP2NOVA

Archived copy · cryp2nova.com

FOUNDATIONAL PRINCIPLES

Internet of Trust – Cloud 3.0

Archethic's vision is to lay the groundwork for the Internet of Trust. It's anchored in a scalable, transparent, and invulnerable decentralized network—the Archethic Public Blockchain. This network is tailored for widespread adoption, featuring a novel, highly secure validation consensus (ARCH) capable of handling an unlimited number of transactions seamlessly.

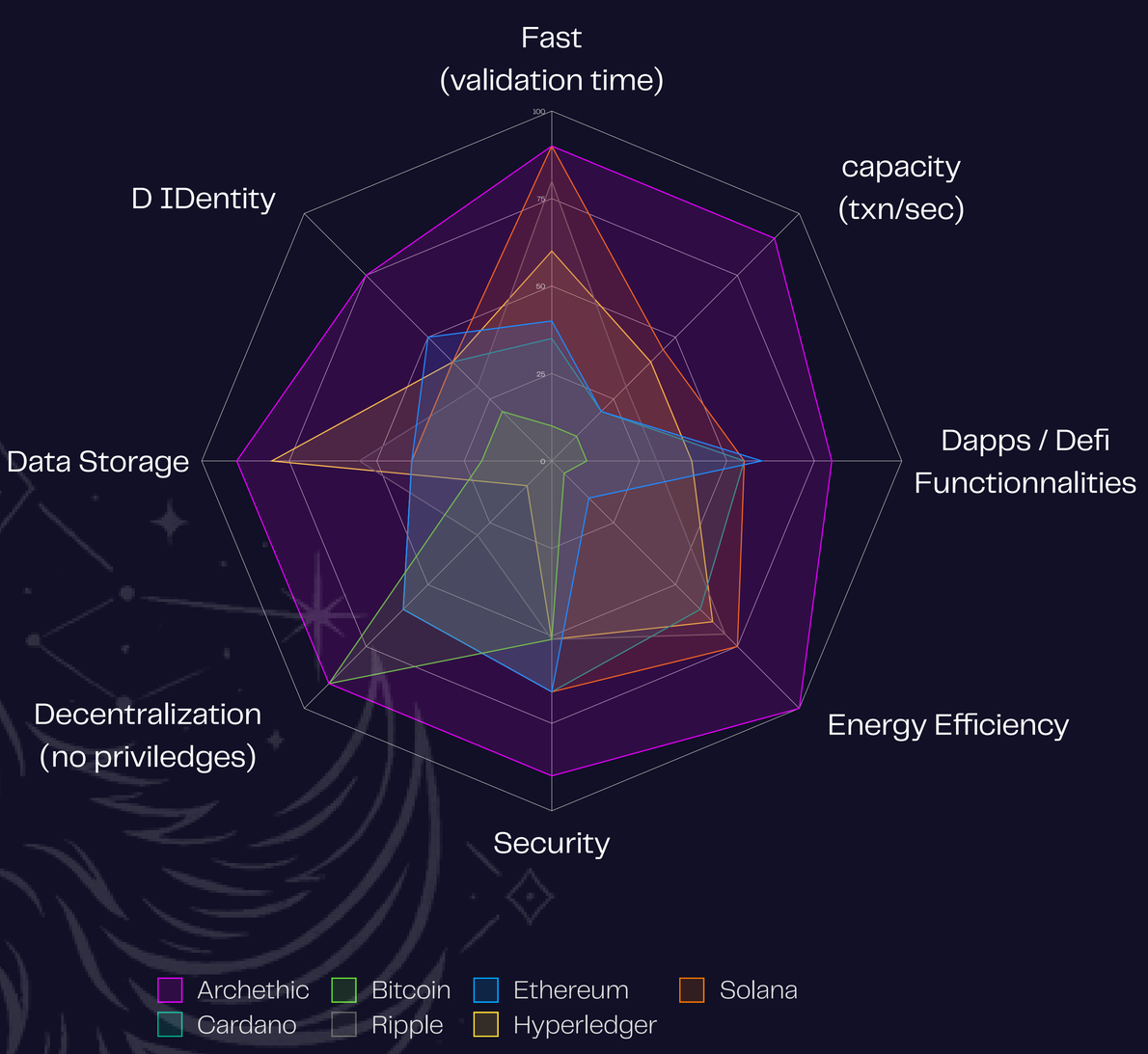
Open Innovation

After four years of intensive research and securing 11 robust international patents, Archethic possesses key technological advantages over its predecessors: scalability, speed, dependability, and innate biometric recognition simplicity. These patents will be contributed to the open-source community, encouraging widespread participation and accelerating innovation.

Archethic is redefining technological engagement, giving back control of technology to humanity, and ensuring individual sovereignty over identity.

Unlimited DApps

Archethic's blockchain is designed to not only replace but also enhance existing applications. It establishes a versatile, open ecosystem that transitions users from relying on centralized entities (like Facebook, Google, Amazon, Banks, etc.) to a decentralized framework. In this



framework, individuals maintain sovereignty over their data, assets, and privacy.

Identity and Privacy

Archethic's Decentralized Identity initiative focuses on returning technological control to humanity. It aims to foster broader technological inclusion by simplifying processes through an unfalsifiable biometric identification system. This system inherently integrates biometric technology, using the complex inner patterns of finger veins — a unique trait for each individual. Notably, it achieves this without storing any biometric data, ensuring privacy and security.

CRYP2NOVA

Archived copy · cryp2nova.com

ARCHETHIC'S CURRENT POSITION

ARCH Consensus: Enhancing Safety, Scalability, and Energy Efficiency

For the first time, blockchain technology operates without a centralized authority, providing a system that's not just unbiased but also transparent and immutable. Archethic's innovative ARCH Consensus relies on the random selection of a small group of nodes (approximately 197 per 100,000) for transaction validation and storage. This approach, coupled with supervised multicasting, ensures efficient data location and a linear increase in transaction processing speed relative to network size, achieving over 100 times scalability.

Smart Contracts: Digital Age Automation

Smart contracts in the digital realm are akin to robots in the physical world, executing tasks based on specific triggers. Archethic's smart contracts represent a technological advancement. They are self-operating and can be triggered by internal events (like dates, transactions) or external realities (via the Oracle channel, which is verified through consensus and cross-referencing). This includes variables like weather, stock market fluctuations, and news updates. These contracts are fully customizable, capable of managing diverse operations from stock control and payments to web hosting, all within the verified transaction framework (UTXO).

Decentralized Identity for Enhanced Privacy

Archethic's decentralized identity system eliminates the reliance on third parties, like Google or Facebook, for identity management, preventing potential conflicts of interest and unauthorized data usage. Identity information is stored across numerous nodes, ensuring its longevity and integrity. This setup not only maintains privacy but also ensures interoperability with other applications. Combined with smart contracts, this decentralized identity becomes key to our interactions, facilitating access to various services (like public events, transportation, and messaging) without revealing identity specifics.

Eliminating Passwords and Redundant Media

Archethic integrates biometric technology directly into the blockchain, enabling effortless and secure identification without storing any biometric data. This method uses biometric data from a finger to generate multiple cryptographic keys, which are never revealed. These keys encrypt the digital identity, accessible only to the individual capable of regenerating a key. This approach doesn't just exhibit technological finesse by generalizing biometrics safely; it also addresses blockchain's widespread adoption challenge, removing conventional barriers like passwords.

Archived copy · cryp2nova.com

INFRASTRUCTURE LAYER

THE TECHNOLOGICAL LAYER : ARCHETHIC'S TRANSACTION CHAIN

Archethic addresses the challenges of scaling blockchain technology for worldwide adoption. Traditional blockchains struggle to integrate billions of transactions into a single block chain, and no consensus method can universally verify such a vast number of transactions across all network nodes. Additionally, current peer-to-peer (P2P) networks can't consistently ensure data freshness on asynchronous networks without significant slowdowns, such as the excessive computation of block nonces (Proof of Work) seen in Bitcoin's network. Archethic's innovative solutions include:

ARCH Consensus

Atomic Rotating Commitment Heuristic

Atomic Commitment is the form of "absolute" consensus that implies 100% concordant and positive responses or the refusal of the validation of transaction.

Heuristics is the set of algorithms, software, and parameters that manage the entire network, allowing the network to elect, in a decentralized and coordinated way, the nodes in charge of validating and storing transactions chains.

Rotating, the network being fully distributed (no central or privileged role), the nodes elected for each operation are constantly changing so that no node can predict which node will be elected until the transaction arrives.



"We are building a scalable, simple, and sustainable infrastructure that will catapult the digitalization of services that have remained excluded due to commercial and technological barriers."

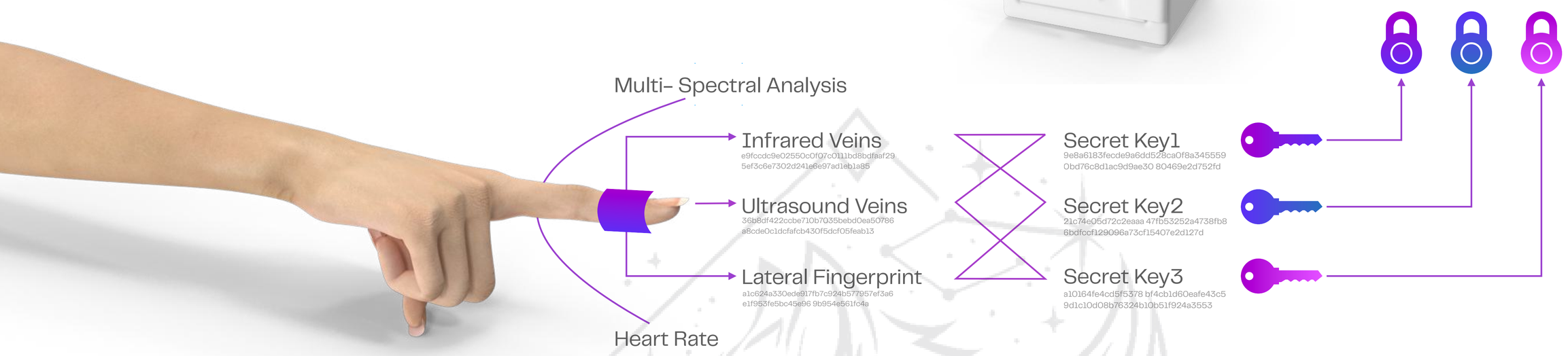
Nilesh Patankar
COO – Co-Founder

Archived copy · cryp2nova.com

TRUST LAYER
Grail Of Mass Adoption



Decentralized Keychain
Country ID key1, key2
Wallet UCO key1 ...
Smart-contracts key1 ...
Bitcoin, Ethereum, Binance ...



An authentication of the world population independent of the system

Unlike biometric identification on a smartphone that will only work on one smartphone – Archethic authentication works for any person and on any device. As no keys are stored, it is compatible with the most stringent data protection regulations (GDPR, CNIL, etc.), making biometrics available for large-scale use.

An authentication that cannot be used without our knowledge

Unlike fingerprints, irises or faces can easily be reproduced and falsified from a photo on Facebook or in the street but it is not possible to reconstruct the inside of a finger. The device checks vital signs during each authentication to ensure that the finger has not been cut off and that the person is fully aware and consenting before any transaction validation.

Automatic lifelong learning ... Without key storage

As shown in the figure above, the keys are generated in pairs from the biometric measurements. If any one of the measurements is different (cut, burn, etc.) then only one key will match and can validate the authentication while two new keys will be added to encrypt (via associated public keys) the decentralized key ring, thus learning a person's new biometric measurements without ever having to store the keys.

Decentralized+Interoperable Identity

Technically, the decentralized identity of a person or a connected object is made up of randomly generated Seed (root key) from which it is possible to generate all keys according to a path of derivation. So, for any access to a service or an application, a key will be calculated on the fly from the seed (root key) and the first public key associated with a service or an application. Thus allowing the creation of an infinite number of identities without ever creating related keys.

Archived copy · cryp2nova.com

GOVERNANCE LAYER
Community / Common Goods

The governance of a Decentralized Autonomous Organization (DAO) is a crucial challenge for Blockchains. The Bitcoin network has the most advanced decentralized governance, but it is based on a single type of actor – the miner or the largest pool of miners. This ignores a significant part of the ecosystem, including users, application providers, technical contributors, and even the Blockchain itself.

Archethic's governance is based on technical and functional fundamentals to survive and adapt to changes in society, including on-chain and off-chain decentralized governance, including all of the following actors :

Users
Anyone with the ability to prove their uniqueness (via biometric devices or other processes).

Miners
Owners of the mining nodes which constitute the network itself.

Applications & Services
Application providers with a weightage based on the generated usage.

Foundation
Their role is to lead the community and to organize governance.

Ethics Council
The council members will be proposed/ elected by the community and will have a veto right overall technical features that would impact the privacy of users.

Technical Council
Composed of the "core developers" with a weightage based on the importance of their code contribution.

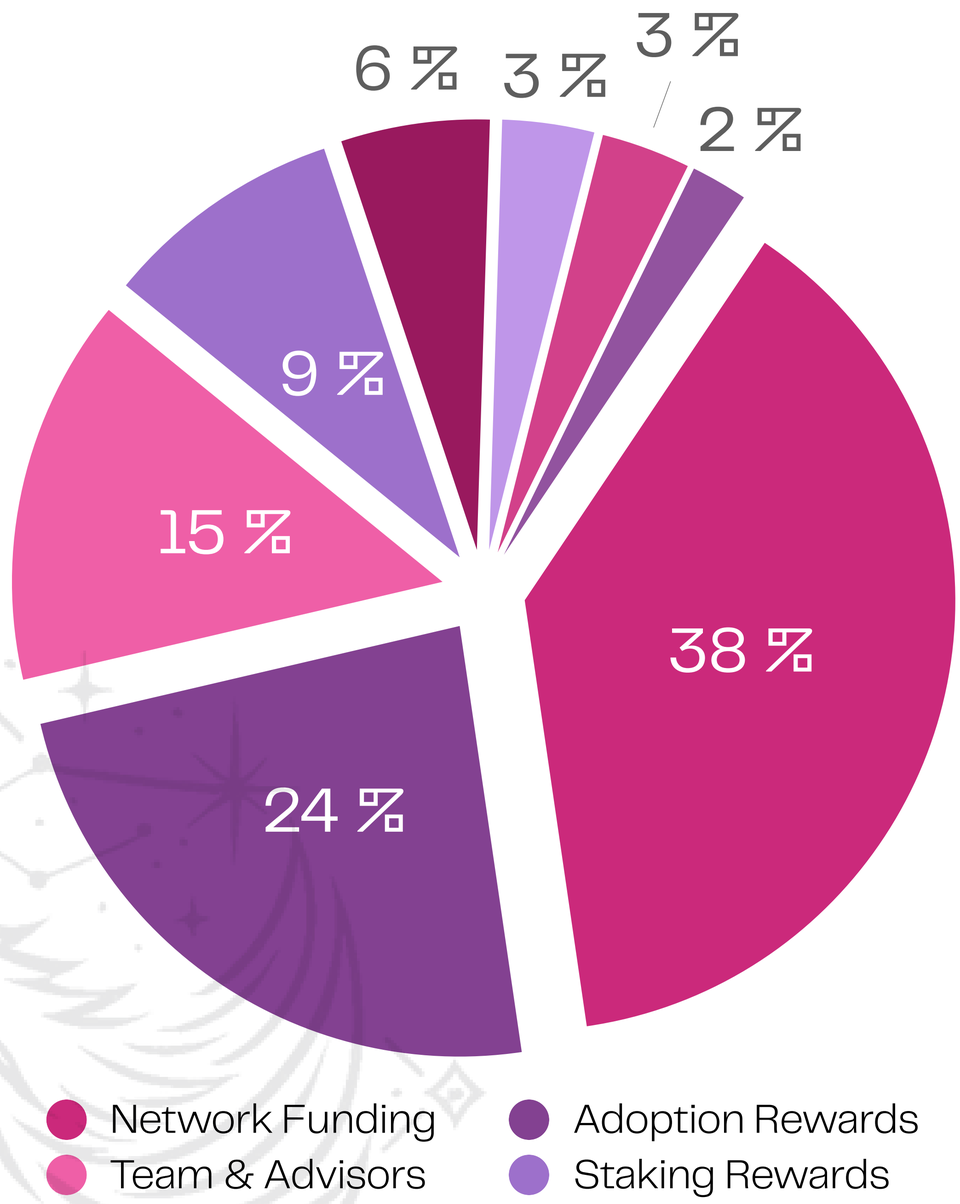
Blockchain
The Blockchain itself, specifically through its ability to test a full-scale functionality before deploying it on the network. For example, the maximum size of transactions is not linked to a point of view, rather it can be directly tested to determine the actual impact on the network with respect to the need considered.

Archethic companies
As the creators/guardians of the network.



Archived copy · cryp2nova.com

ARCHETHIC'S BEATING HEART : $UCO



Network Funding – 38.2%

Used by the foundation to fund the network development. It includes the circulating supply of 216M, remaining will be used to fund the future blockchain development.

Adoption Rewards – 23.6%

Under the control of the DAO, this wallet is dedicated to promote the use of the Archethic Public Blockchain (incentives for core & dapps developers, grants for new services and rewards for end users by using services).

Team & Advisors – 14.5%

2 years cliff from TGE with 60 months linear release with holding incentives & 3 years Cliff from TGE + 60 Months linear release.

Staking Rewards – 9%

9M UCO per year distributed amongst people staking.

Exchange Liquidity – 5.57%

CEX & DEX Liquidity.

Gamification & Geoincentives – 3.44%

Gamification can be used to incentivize network participants and reward nodes in areas not currently on the network.

Dynamic Miners Reward – 3.34%

Supplements the transaction fees to pay fixed miner incentives until transactions fees > miners rewards. This pool helps the network through bootstrap phase leading to equilibrium and deflation.

Foundation – DAO – 2.13%

90% SUPPLY BURN

After initial listing without public sale, our circulating supply compared to fully diluted supply was divergent from market standards, affecting investors trust. The core objective is the creation of a self-sustaining network without compromising the trust. Based on the simulations, it has been concluded that a thriving economy can be created by redistribution of tokens and burning the excess. Archethic would be one of the few listed public blockchains to announce a burn of 90% of its tokens. This number is not a marketing ploy, it is supported by the design work done to achieve self-sustenance.

Burn : 90% of total supply (10 Billion)

Smart-contract: 0x8a3d77e9d6968b780564936d15B09805827C21fa

CRYP2NOVA

Archived copy · cryp2nova.com

JOIN OUR COMMUNITIES !

CRYP2NOVA

JOIN US

Join the Community

Connect, collaborate, and engage with like-minded individuals in the Archethic community.

Github
Discord
Telegram
Twitter
LinkedIn
Instagram
Medium
YouTube

Archived copy · cryp2nova.com