



# **CipherProxy**

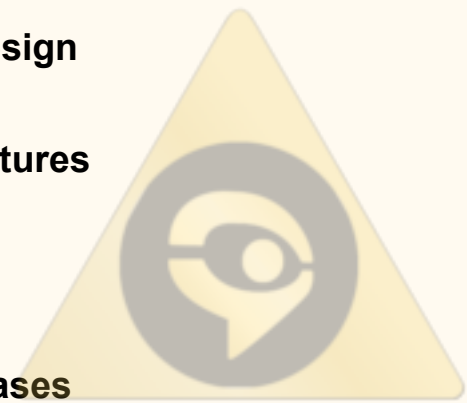
***The Interoperable Blockchain Cloud for Enterprise***

**Rediscover Adtech & Martech**

**March 2021**

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# Preface

With escalating concern over consumer data privacy and security brought on by Big Tech, a new philosophy of decentralized, fair, peer-to-peer systems is emerging. It is widely known and indisputable that the “Big Five,” namely Google, Facebook, Apple, Microsoft, and Amazon, possess monopolies over consumer data. By exploiting this power, [they profited roughly 900 billion USD in 2019 alone](#). To maintain control over consumer data, the Big Five retain their data brokers’ dominance by collecting data from consumers and businesses alike. Once these data are amassed, access is peddled back to the very companies they were originally mined from. Many issues arise with this type of system. Application owners and developers are locked into their walled gardens and are anchored to poor interoperability and high dependence. Big Tech exposes its customers to privacy and security risks.

Consequently, businesses are facing an ever-increasing cost of customer acquisition. Companies and developers are growing more and more frustrated by the high premiums for integration and poor experiences with data monopolies. A decentralized cloud network is intriguing for this reason. The challenge is to divorce from these walled-garden environments with many overbearing barriers standing in the way.



***What if you could bypass the walled-garden environments and share data securely without the need for a centralized platform to facilitate the exchange?***

These businesses could swiftly enrich customer experience, broaden product offerings and better-preserve user privacy while simultaneously releasing themselves from the walled gardens of Big Tech data silos. This inevitability of decentralization is where we are heading. With amplified tech industry challenges, such as COVID-19, Big Tech lawsuits, and cyber breaches, this is becoming a reality sooner rather than later.

**Introducing CipherProxy, the Interoperable Blockchain Network for Enterprise.**

# Introduction

CipherProxy is a Polkadot-inspired, interoperable, next-gen distributed network consisting of several modular and interconnected layers. One of the powerful use cases of this network design is the ability to decentralize consumer data. Using this, businesses can unify all touchpoints of a consumer journey in one place to experience the reality of true omnichannel marketing while maintaining consumer privacy and security.

CipherProxy stands in a unique position. Operating before blockchain as an SEO & digital marketing effort, we understand the pain points of what makes methods like omnichannel marketing extremely difficult in practice. When our core team was ready to launch our first campaign, a series of dilemmas surfaced regarding data privacy, security, and flexibility. These dilemmas are what motivated the integration of blockchain technologies, inspiring the design of a new decentralized cloud system.

Utilizing a combination of new blockchain innovations on top of existing infrastructures, it has never been easier to leverage the power of decentralized and distributed networks. However, unlike most blockchain projects that are simply just a distributed ledger, the CipherProxy network of blockchains allows for versatile plug-and-play functionality with enterprise data ecosystems.

With the integration of these technologies and the participation of data enterprises, we can initiate a new standard in the industries of cloud technology and big data. The CipherProxy network incentivizes enterprise participation in a multitude of ways to better facilitate the foundations of a fairer, more decentralized world.

## ***What is a Decentralized Cloud?***

Decentralized cloud computing allows a network structure to be distributed among numerous compute nodes. These nodes can service any request equally, thereby fostering a trustless

environment. Network participants can host their own node if they have extra computing resources they would like to contribute. The advantage would be twofold; no single point of failure, and an achievable scalability as more nodes join the network.

## **A World of Growing Problems**

With privacy and security concerns escalating, the issues brought on by big data monopolies are only forcing the need for further innovation in data industries. Blockchain presents many solutions for the existing problems created by these monopolies. However, to realize these solutions, enterprises and developers must enforce a standard of interoperability and security. The CipherProxy network is constructed from the core with those aspects in mind. The most crucial component to the mass adoption of blockchain technology beyond its financial use case is the ability to interoperate with existing systems.

### **Overall Issues Facing Big Data**

We show the challenges for Adtech and Martech in this presentation; nevertheless, these issues expand into all industries that interact with big data monopolies.

#### **The essential points to note are:**

- Overly centralized ecosystem controlled by walled-garden gatekeepers
- Lack of interoperability and integration
- Lack of security, privacy, and transparency
- No first-party data ownership
- Centrally bias AI/ML networks
- Lack of trust leading to increased regulations

## Issues Facing Adtech and Martech

The true reality of omnichannel marketing is challenging to achieve due to data silos and walled-garden environments controlled by Big Tech. Consequently, this barrier results in a set of negative side-effects.

### The most concerning and pressing of which are:

- No unified database for all user touchpoints to be stored, which leads to incomplete attribution techniques and machine learning samples
- Databases use different methods of storing and transferring data
- Consumers, developers, and businesses pay high premiums
- Lack of security, ownership, and privacy for businesses and consumers alike
- No way of seamlessly cross-validating data between different ecosystem entities
- Increased regulations (e.g., GDPR, CCPA, CPRA)

### *\* Issues with Big Data monopoly systems*

<b>Big Data Monopolies</b> (Big Tech)	
<b>Consumers &amp; Businesses</b>	<b>Vendors &amp; Developers</b>
<ul style="list-style-type: none"><li>• Lack of privacy in their data</li><li>• Lose ownership of their data</li><li>• Third-party data sales without consent</li><li>• Use data monopolies the likes of Google, and Facebook</li></ul>	<ul style="list-style-type: none"><li>• Follow strict rules for integration</li><li>• Pay high fees for integration</li><li>• No direct to consumer relationship</li><li>• Complicated service level agreements</li></ul>

# Increasing Need for Solutions

The CipherProxy network offers a decentralized solution. With its layer-1 substrate blockchain, our network will enforce an enterprise-enabled, decentralized, and interoperable standard across its counterparts. With that in mind, the ability to integrate blockchain functionality will be equivalent to using an SDK or an API, suggesting that enterprise companies will not have to alter their current infrastructure to benefit from the network. The unique core layers of our network make this reality possible.

## They are as follows:

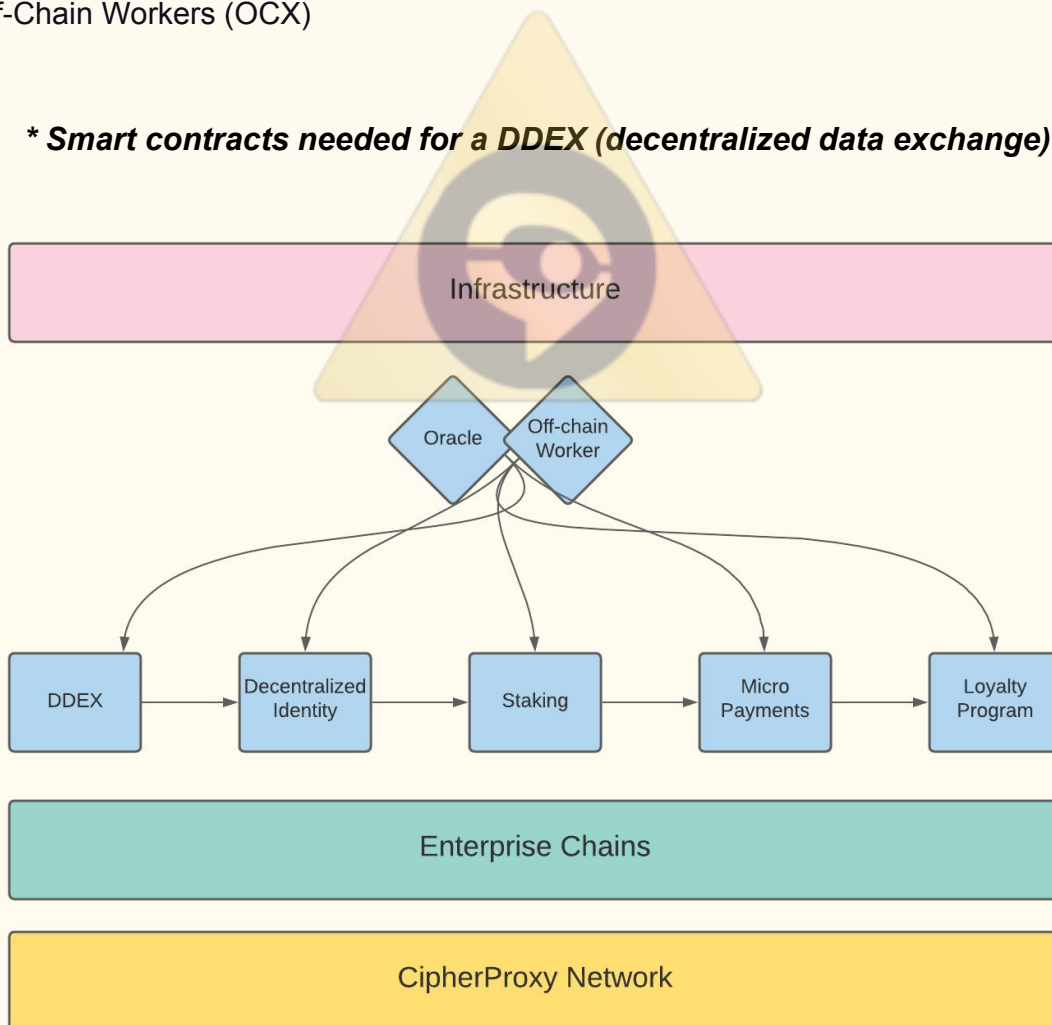
- Specific side-chains that enable the ability to scale horizontally by creating an interoperating network of blockchains rather than one overloaded blockchain. These chains can talk to each other and be private or public (permissioned or permissionless). In effect, this creates a decentralized cloud enabling a unified and ethical place for all user touchpoints to be stored.
- Cross-chain Smart Contracts that enable hyper customization of applications for interacting with blockchain networks. (e.g., DDEX)
- Oracles and Off-Chain Workers (OCX) that act as data bridges from off-chain environments to on-chain environments (e.g., from a cloud to a blockchain).

Using the components listed above, we can apply our network to the industries of Adtech and Martech. The solutions provided by this use case would consist heavily of smart-contracts that allow the appropriate applications and incentivization for companies to bring data into the environment and develop their own personalized side-chain.

**What are some of the smart contracts needed to create the necessary applications to benefit the Adtech and Martech use cases?**

- Decentralized Marketplace for peer-to-peer data exchange (DDEX)
- Decentralized digital identity (DDID)
- Loyalty Program
- Staking Rewards
- Governance
- Micropayments
- Oracles
- Off-Chain Workers (OCX)

**\* Smart contracts needed for a DDEX (decentralized data exchange)**





## **What direct benefits does this type of network provide to an enterprise company?**

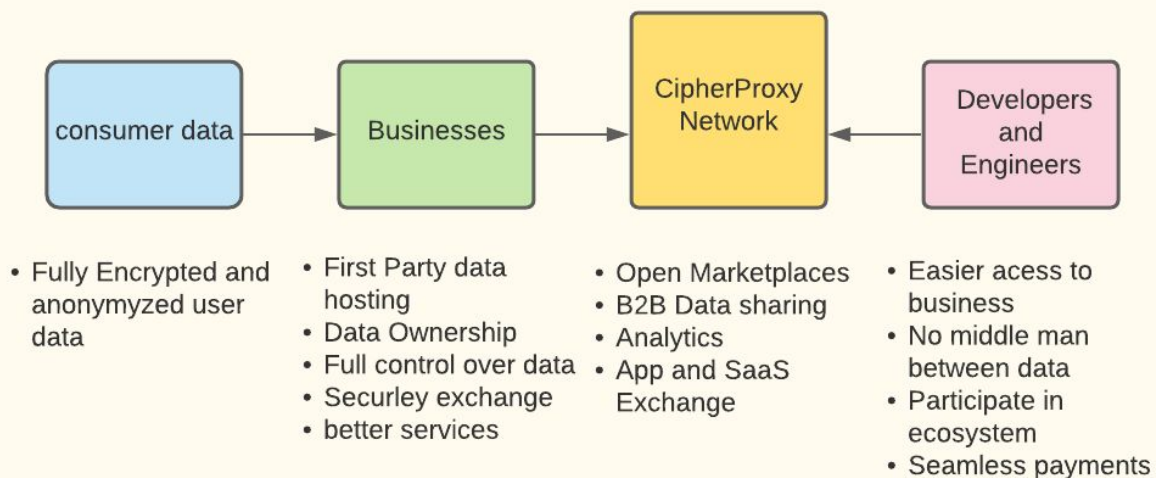
CipherProxy focuses on bridging the vast gap between enterprise needs of privacy, scale, ease of use, and real-life use cases with current blockchain technology. Additionally, it is fully compatible with Polkadot to meet interoperability standards.

### **Direct benefits include but are not limited to:**

- Fully encrypted and anonymized consumer data
- Actual data ownership for businesses and consumers
- First-party data hosting for businesses
- Peer-to-peer data exchange
- Removing barriers to access businesses for developers
- Direct data access for developers
- Developers can contribute and participate in the ecosystem
- Faster results and seamless payments



### **\* The benefits of using the CipherProxy Network.**



# Next-Gen Blockchain Design

## Network overview

**Infrastructure** - CipherProxy's network will seamlessly integrate with existing centralized infrastructures. This includes multi-cloud and on-premises ecosystems. It uses techniques like federated learning, which can allow utilization of distributed machine learning capabilities within existing environments.

**Layer 1 technology** - CipherProxy's blockchain is built from scratch using Substrate with a key focus on interoperability and enterprise accessibility. It aims to become a Polkadot Parachain to leverage the security and scalability of the Polkadot chain. Other mainstream blockchains will also be fully interoperable with this network. (e.g., Ethereum, HyperLedger, etc .)

**Consensus Protocol** - The Layer-1 CipherProxy blockchain will use the (Proof-of-Stake) PoS consensus protocol. It allows for heterogeneous sharding enabling vertical scalability. The PoS protocol is designed to facilitate novice node operation by staking cryptocurrency within the ecosystem. Staking enough cryptocurrency can grant the user access to operating as a validator node. This comes with the responsibility of maintaining network standards.

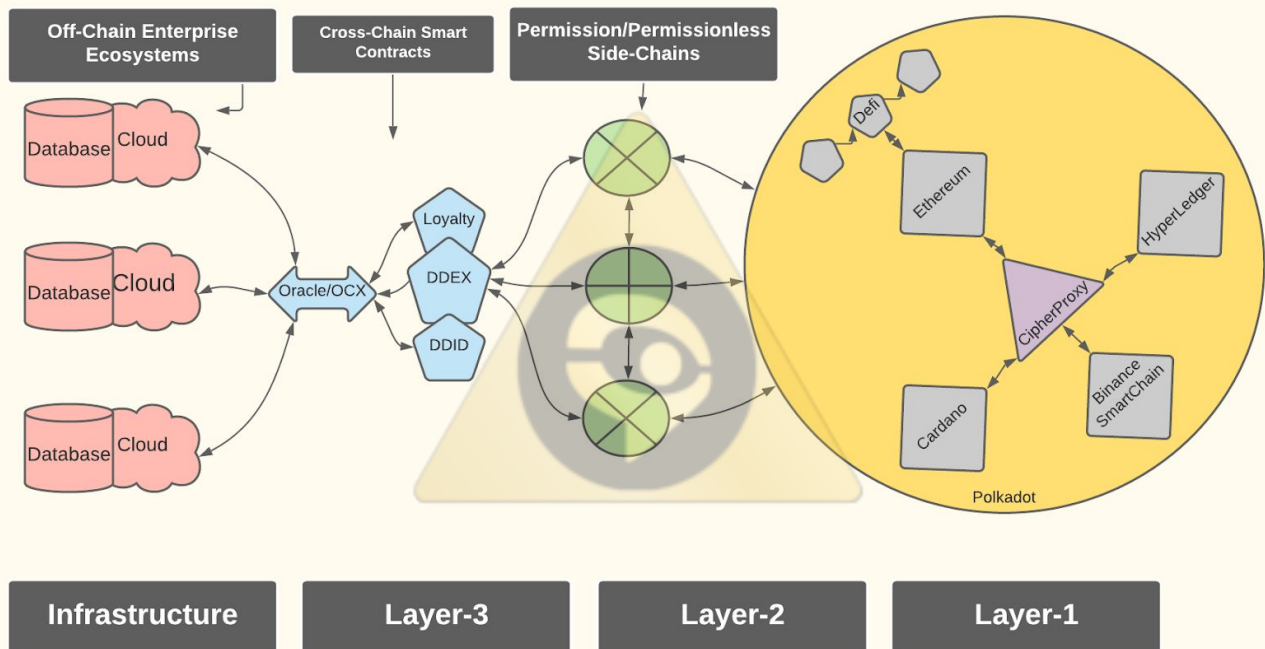
**Layer 2 technology** - CipherProxy employs a series of interconnected Substrate side-chains with specific business logic to increase the network's scalability, functionality, and versatility. These chains can be private or public, use various consensus protocols, and sync with other side-chains and blockchain ecosystems.

**Layer 3 technology** - Enhanced customization and usability can easily be applied to the CipherProxy network using Wasm based cross-chain smart contracts that hold highly specific business logic. This will allow developers to create DApps with a standard of interoperability. Moreover, this layer also holds the smart contracts for oracles and off-chain workers (OCX).

## What makes this design unique?

CipherProxy leverages the best of Polkadot. Polkadot enables forkless upgrades, allowing blockchains to evolve and adapt easily as better technology becomes available. Its unique design gives projects more possibilities for innovation and flexible iteration than was ever possible in previous networks.

### \* The network's overall design and its interoperability with existing infrastructure



## Blockchain Network Features

**Leverage Defi** - CipherProxy aims to establish universal protocol standards for the enterprise Defi space, improve communications between the enterprise and the Defi ecosystem, and research emerging Defi protocols.

**Decentralized Cloud Storage** - With decentralized cloud storage, there is an extensive distributed network of many nodes across the globe that are independently owned and operated. By leveraging a cross-chain technology that can interoperate with off-chain ecosystems, we can significantly reduce the cost per byte of storing data on-chain. Additionally, we use methods such as storing only the hash (IPFS) on-chain to verify data sets without storing the data itself.

**Federated Learning** - Federated learning (FL) is a promising decentralized deep learning technique that allows users to update models without sharing their data collaboratively.

**Decentralized Digital Identity** - Decentralized identity is a trust framework in which identifiers, such as usernames, can be replaced with self-owned, independent IDs, enabling data exchange using blockchain and distributed ledger technology to protect privacy and secure transactions.

**Smart Contract Micropayments** - Autonomous algorithmic micropayments using cross-chain smart contracts for facilitating fast seamless payments. It is worth noting that smart contracts can be utilized to make various functions autonomous.

**Analytics and Reporting Tools** - GraphQL will be used for querying blockchain data and creating reporting tools. The rest of the workload can be done using the compute power of traditional systems such as clouds and on-premises storage.

**Substrate** - Substrate is a modular framework that enables a user to create purpose-built blockchains by composing custom or pre-built components. Working alongside enterprise companies, we can easily assist them in making their own side-chains to add to the distributed network of blockchains.

**Chainlink** - The CipherProxy network can use a variety of oracles to achieve its goal of building a data bridge. Our project will work interoperably with Chainlink in order to leverage the largest decentralized oracle community to date.

**Staking Rewards** - Enterprises will be rewarded for running validator nodes (side-chains) on the network. They will also be rewarded heavily for staking on the network. Anyone can stake and receive high APY as interest for providing liquidity.

**Substrate Runtime** - In Substrate-based chains, the runtime is referred to as the "state transition function"; it is where Substrate developers define the storage items used to represent the blockchain's state as well as the functions which allow blockchain users to make changes to this state. Simply stated, it will help us enable cross-chain interactions and forkless updates.

*& so much more*

## Ecosystem Tokenomics

All crypto currencies used in our ecosystem will be designed and launched with ICO standards and regulations in mind. This includes making sure that our currencies are SEC compliant.

**The CipherProxy network will consist of at least four crypto tokens:**

**CipherCoin (CXC)** - The main token, named CipherCoin (CXC), will be used for peer-to-peer value exchange. Validator nodes will be rewarded heavily in CXC for staking a large amount of crypto and maintaining overall network security. More minor staking participants are rewarded with interest paid in CXC for providing liquidity to the ecosystem. Consumers and businesses can be paid in CXC for their data's third-party use by achieving actual data ownership. We plan to add many mainstream cryptos in the environment to be used for value exchange as well. The tokens value will be determined by the amount of financial value within the entire ecosystem.

**ProxyWatts (PWAT)** - The second coin will be the micro-coin for the use of autonomous payment between machines and will be called ProxyWatts or P-Watts (PWAT). P-Watts will also be used as the "energy" of the network acting as the currency used for paying network fees (which will be very low). It

is designed to be light weight for facilitating scalable autonomous transactions. Contributed compute power will be calculated in P-Watts as well.

**CipherProxy Stable Coin (CXP)** - Finally the third token of the ecosystem is a stable coin that will be used to make the transition from traditional currency to cryptocurrency within the same environment. It will be linked 1:1 with the US dollar or other world currencies. Many benefits come with introducing a stablecoin into your currency stack.

**CipherProxy NFT Chain** - A chain that will allow users to mint their own NFT off of our NFT chain. The ability to create your own NFT will be as easy as filling out a form and hitting a button. Each new NFT minted into the network will have its own “DNA” and will be related to the genesis NFT.

***How will we distribute the tokens?***

<b>Role</b>	<b>Purpose</b>	<b>Features</b>
Right	Bootstrapping Engagement	Product usage, Voting, Governance, Product Access, Contribution, Ownership
Value Exchange	Economy Creation	Work Rewards, Selling something, Buying, Spending, Active/Passive work, creating a product
Tool	Collateral	Running smart contracts, Security deposit, Usage fees
Function	Enriching user experience	Joining a network, Connecting with users, Incentive for usage
Currency	Seamless Transactions	Payment unit, Transaction unit
Earnings	Distributing benefits	Profit sharing, Benefits sharing, Inflation benefits

**Over time, we will come to a collective agreement as a core team about the specific percentage of coins distributed to each section of the ecosystem.**

# Future Paths and Use Cases

Although we focus on one of the strong use cases of the CipherProxy network in this presentation, in the future we plan to develop and incentivize developers to build more functionality into the ecosystem. There are many industries a decentralized network of blockchains could benefit.

**Some of the interesting and pressing use cases for future development are:**

- Autonomous IoT marketplace
- Autonomous AI marketplace
- Decentralized Banking
- Decentralized Smart Cities
- Federated ML network
- Decentralized Autonomous Supply Chain
- NFT Digital Record Label
- Cross-chain NFT marketplace
- Decentralized Exchange
- Decentralized Autonomous Organization
- Decentralized Voting



# Market Analysis

We intend to disrupt the current market paradigm of centralized control of user data by monopolistic data collection megaliths who currently control the use of that data. In doing so we will be creating and participating in a new industry of decentralized data management.

**Industry Type:** Decentralized Cloud Technology, Blockchain Technology

**Industry Category:** Adtech and Martech

**Industry Characteristics:** The market is currently dominated by monopolistic walled garden ecosystems such as Google, Facebook, and Apple. These systems function as universal user authentication for third parties seeking to interact with and sell to. The customer has very little choice in how their data is shared. The company behind the ecosystem maintains ownership of the user data as an asset.

**Stability:** The Cloud computing industry has been a cornerstone of our society for the past 10 years. The industry has become more dynamic recently allowing for decentralized innovation.

**Trends:** The Decentralized Data Marketplace

**Direct Competitors:** Ocean Protocol, Cere Network, Kylin Network.

**Status Quo:** CipherProxy is competing with the big five: Facebook, Apple, Amazon, Google, Microsoft, who comprise the vast majority of the online marketing industry. CipherProxy is disruptive to the industry as a whole.

**Total Available Market (TAM):** The total market available for CipherProxy is the whole of cloud and data industries. Projected to be over a 1 trillion dollar market by 2025. This also includes the



25 trillion dollar payment industry. Our demographic is enterprise business, any business that uses cloud environments, big data technologies, and consumers.

**Serviceable Available Market (SAM):** Consumers and businesses who have access to the internet. Our network is a redesigned approach to the technologies that have created the largest companies of today. So long as you use the internet, you can use our technology.

**Market Segments:** Cloud Infrastructure, Social Medias, Advertising & Marketing Companies, Enterprise, Consumers, Developers, Vendors, Banks, etc... (wide variety of use cases)

**Messaging:** CipherProxy is a fairer, more ethical, and more scalable alternative to all existing cloud and Big Data competition.

**Uniqueness:** Enterprises will be attracted to the benefits of a decentralized environment and will be incentivized to make the seamless integration of blockchain into their ecosystem. Users will make a natural migration due to the higher level of security, privacy, transparency, and data ownership offered by the platform. Developers and vendors will find the efficiency, openness, and cost of using our network refreshing. All around, decentralized cloud technology when realized offers a much more ethical approach to Big Data.



### **SWOT Analysis:**

**Strengths:** Innovation, work ethic, technical background, resourcefulness. Potential first to market for a fully interoperable blockchain cloud and privacy-focused data exchange.

**Weaknesses:** Limited cash-flow, Not enough Human Resources, Lack of involvement by industry

**Opportunities:** Enterprise partnerships, SaaS Defi alliance, Chainlink Validator, Polkadot Parachain, web3 alliance, exchange listings, partnerships with the likes of Polygon, Nodle, Plasm, Web3, Parity, Cere, Kylin, Ocean Protocol... etc.

**Threats:** As a member of the burgeoning decentralized marketing network industry, we are vulnerable to asymmetric growth of the greater crypto market. We address this by offering interoperability through a cross-blockchain infrastructure, diversifying our exposure.

**Approx. Numbers on Industry Costs:**

**Average pay for a blockchain developer:** [\\$77,000-\\$151,000 per year](#)

**Average pay for other blockchain startup roles:** \$80,000-\$180,000 per year

**Additional cost to develop project:** [Between \\$50,000 - \\$300,000](#)

**Developers for this project:** 6 to start and scale to a minimum 10.

**Funds will go into a variety of areas including:**

**Design:** System Blueprint, user interface/experience design including wireframes, high-fidelity designs with a prototype and low-fidelity designs with app flow.

**Development:** Coding, Programming and Testing

**Deployment:** Deployment on Cloud Platforms, Delivery and DevOps

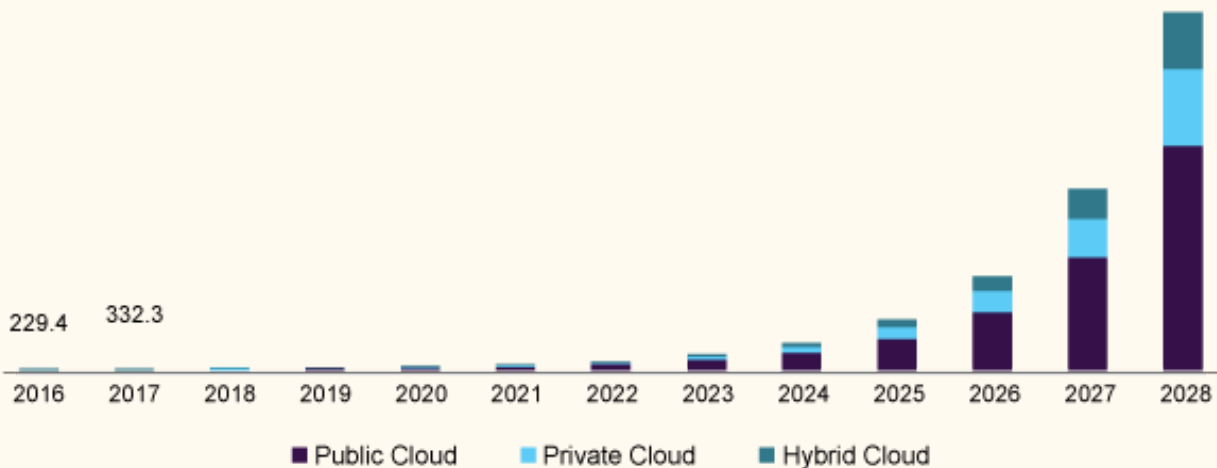
**Migration:** Moving the existing solutions to the Blockchain platform

**Maintenance:** Maintaining new updates and testing

**Upgrade:** New features, Changes in Smart Contracts, forkless upgrades

**Third-Party Tools:** Hosting, Storage, Notification System, Collaboration

## U.S. blockchain technology market size, by type, 2016 - 2028 (USD Million)



Source: www.grandviewresearch.com

Blockchain Technology Market Size Report, 2021-2028

## Attractive Opportunities in Cloud Computing Market



The market growth in APAC is mainly attributed to rising digitalization among enterprises in the region and focused investments to reduced expenses.

APAC



371.4 USD Billion  
2020-e

832.1 USD Billion  
2025-p

CAGR of  
17.5%

The global cloud computing market is expected worth USD 832.1 billion by 2025, growing at CAGR of 14.2% during the forecast period.



The market growth can be attributed to the growing adoption of cloud computing and related technologies, globally.



Increased automation and agility is expected to drive the cloud computing market.



Acquisitions and product launches would offer lucrative opportunities for market players in the next five years.



Rise in the number of SMEs to create new revenue opportunities for cloud vendors and increase in the adoption of hybrid cloud services are expected to provide growth opportunities for the vendors in the cloud computing market.

Cloud Computing Market Size, Share and Global Market Forecast to 2025 | COVID-19 Impact Analysis

# CipherProxy Team

## **James Harbeck** - Founder

High-Frequency Innopreneur and Visionary with rapidly expanding technical skills specifically in blockchain and cloud-based technologies.

## **Daniel McCoy** - Co-Founder

Over a decade of experience in many technical fields including networking, cybersecurity, software development, and device repair.

## **Sebastian Pedrosa** - Co-Founder

Where technical and financial skills converge.

## **Potential Hires:**

- ██████████ - AI/ML Specialist
- ██████████ - Blockchain Enthusiast
- ██████████ - Mobile Developer
- ██████████ - Software Developer
- ██████████ - Electrical Engineer & IT Pro
- ██████████ - Digital Media Developer
- ██████████ - Web Developer & Animator
- ██████████ - Front-end Developer
- ██████████ - Cloud Architect & Engineer
- ██████████ - Sales & Marketing



## ***Where are we with the project?***

We have the base code for all the components needed to program out the use case explained above. We clearly understand the technologies at play and have trained with them. We have created test projects that simulate most of the functions needed in the overall network design. We are currently in development mode.

# Conclusion

At CipherProxy, we believe that the shift from centralized data companies to decentralized environments is inevitable. Events occurred over the past year that accelerated decentralized technologies. Yet, the main issue still facing the adoption of these technologies is the lack of interoperability. CipherProxy plans on building a network that will act as one of the bridges to a new phase of blockchain for enterprise companies and consumers. It will stand out with its many practical applications laid over top of the CipherProxy network and will help solve significant issues we face today.

Ultimately, once everyone is on board, blockchain looks to be the new cloud basis. With centralized systems' security breaches continuing to become the norm, we will see this happen sooner than later. Being one of the first solutions of its kind, CipherProxy is positioned to be one of the big players facilitating the migration into hybrid-cloud/blockchain ecosystems. Out of this migration will emerge the next Google, Facebook, Amazon, Microsoft, or Apple.

***CipherProxy welcomes the challenge head-on.***

*“A blockchain-related solution could allow for proper ad engagement tracking that will lead to more precise digital attribution. Higher data quality achieved through transparency and unification of data streams from the different entities in the adtech ecosystem will allow firms not only to track delivered messages but also to set up smart contracts to automatically execute intricate programmatic advertising strategies and eliminate redundancy and irrelevance, to the benefit of both the advertiser and the customer. With data standardization and integration across different parts of the adtech supply chain, marketing messages in an omnichannel environment can be delivered consistently and data can be verified.” - (PDF) Informational Challenges in Omnichannel Marketing ....*

[\*\(PDF\) Informational Challenges in Omnichannel Marketing: Remedies and Future Research\*](#)

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