



Next generation of consumer-brand
interactions.

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1. Problem and Motivation

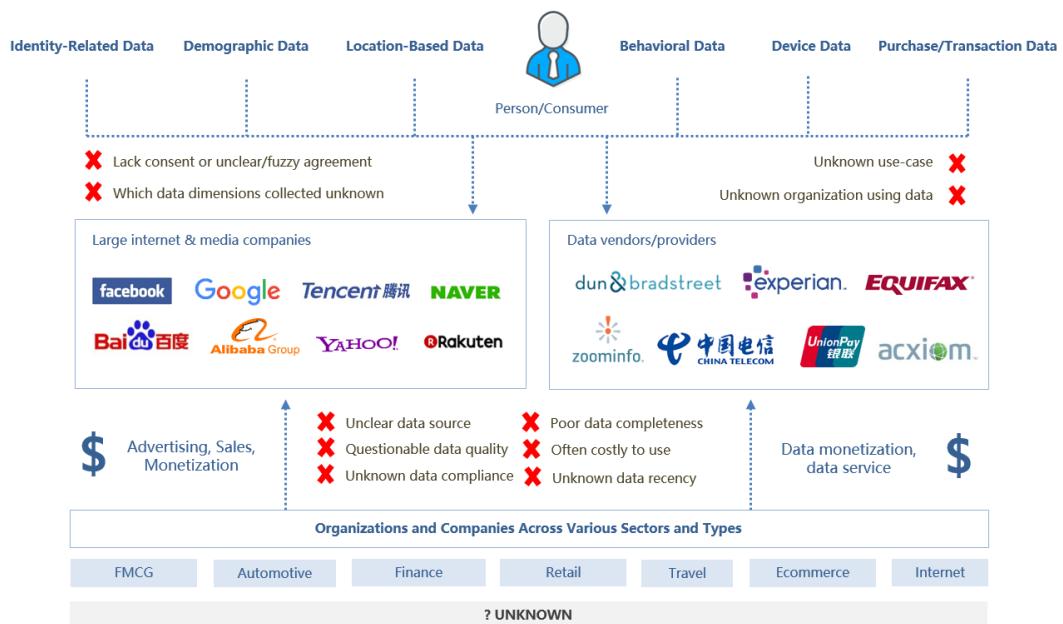
The current consumer data ecosystem is broken.

Broken for consumers and internet users

Data is collected daily from consumers and internet users without them knowing what data is collected, who is collecting it, which third parties will it get distributed to, and how it's going to be ultimately used. Often if there are consent clauses within Terms of Use agreements, they're nested or hidden in a way that designed to have the consumer "agree" without being explicit about data collection and usage.

Broken for brands and enterprises that need access to this data

The majority of consumer data is controlled by large internet and media platforms, and a variety of 3rd party data vendors. For the businesses that need to acquire high quality, legally-compliant data for purposes of marketing, personalization, research, or improving customer experience, it's often always a black box on where and how the data is acquired, its accuracy, its completeness, cost-effectiveness, and legality.



At the end of the day, aggregating large amounts of consumer data means a lucrative data monetization business either directly or indirectly through targeted (or sometimes referred to as programmatic) advertising. **But this centralized data hoarding and control of data by third parties (often amplified by platform network effects) puts increasingly less control and transparency of data by the consumer themselves as well as for enterprises.**

Inefficient channels of engagement between brands and their target consumers

By “channels of engagement”, we mean the method that brands reach out to their target consumers. In the past, display advertising effectiveness can be best described as a lottery, with on average low audience interest match and ROI (return on investment). With the advent of data-driven and programmatic marketing, using audience targeting by via acquired 3rd party data has somewhat increased efficacy of advertising, but questionable consumer data quality and media inventory quality has not solved the core problem. The cases in which data-driven advertising works well is where both the data and media inventory is controlled by a single party on one single platform, examples include Facebook, Google, Tencent, Baidu, or Alibaba.

Looking just at couple numbers regarding the general landscape is enough to put things in perspective:

56%

of digital purchased ads are not seen (not viewed).

Google/Double Click Study

\$6.3 Billion

of digital ads will be wasted on fraudulent activity or bots

ADWEEK

23%

of premium video ads is fraudulent bot activity.

IAB

58% consumers

do not trust online banner advertising.

Nielsen

Simply put, billions of advertising dollars are wasted per year, and the remaining portion has minimal, or uncertain effectiveness. Consumers do not care about the advertisements they see for the most part, and even worse, the majority do not trust them. The value and dollars are mostly expended by large media platforms and a myriad of middlemen, **with the enterprise and consumer not capturing the majority of the value (as a proportion of total market size)**.

Imagine an ideal ecosystem in which 1) value is left on the table for the enterprise and consumer, with little to none middleman involvement 2) instead of a “solicitation” method of engagement, we match consumers and brands based on intent and interest 3) a fully transparent system of engagement with trust and consent.



Tightening data regulation and laws

Laws and regulations regarding consumer data and privacy is continuously more strict and are becoming completely enforceable. With **GDPR (General Data Protection Regulation)** officially rolling out on May 25, 2018, businesses have to rethink how consumer data is acquired and managed. It requires complete consumer consent and awareness, increased privacy, and tighter security.

GDPR is enforced throughout entire Europe and for any companies doing business in Europe or have European customers. For companies outside of EU and not engaging any direct business with Europe, new data regulations still apply and will continue to get stricter, two examples include:

- China's new 2017 Cybersecurity Law (effective June 1, 2017)
- Japan's Personal Information Protection Law (effective mid-2017)

What this means for brands and enterprises

With the combination of a sub-optimal consumer data ecosystem as well as tightening data regulations, it's increasingly hard for businesses to acquire high quality marketing and consumer data. And as a result, businesses may have to rethink their customer data and data-driven marketing strategy.

Problems of mass data centralization

Often a related issue to massive data aggregation is data centralization of large amounts of consumer data in one place – it poses enormous security and privacy risks. After multiple Yahoo data breaches leaking upwards of a billion accounts, and recently the Equifax incident where the most sensitive information of 143 million people were compromised, it's come to broad realization that the root of the problem lies in how sensitive data is stored and managed.

International data flows have increased the world's GDP by roughly 3.5%, equating to total \$2.8 trillion in annual revenues. (McKinsey Global Institute) A number of that scale should be worth protecting, most likely with some success by new approaches to the data storage and management problem.

Shifting dynamics

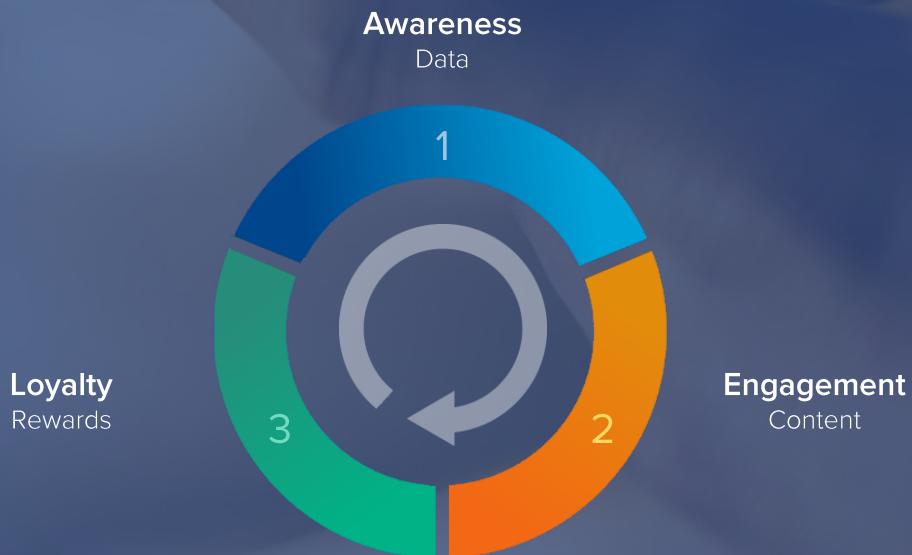
The big data era has capitalized off of the data overload produced by consumers and internet users, and has introduced new ecosystems with a multitude of middlemen that add different types value. As natural with many different types of landscapes and ecosystems, increasing of scale and complexity introduces inefficiencies and problems that are often unsolvable or very hard to be solved unless disruptive paradigm-shifts are introduced that optimize the system for the better. By paradigm shift, we do not mean marginal optimizations or tweaks – we mean changing fundamental flows of value and structure of the system.

The consumer data and marketing landscape could use some large changes in the way its value-chain operates.

Yet, the consumer and marketing data sector is a **\$156 billion** market in the US alone, not including marketing and ad spend, and is waiting to be disrupted.

Our vision is to build an ecosystem that will decentralize the way B2C interactions take place across the entire consumer lifecycle.

An ecosystem that is trust and consent-driven, mutually beneficial, reduces waste, and maximizes value.



2. APEX Solution

Overview

First, we have to shift the power of data back into the hands of the consumer - they are the ultimate owner of their data and identity. There needs to be fully transparent consent and mutual agreement if any part of their data is to be used. Then we need to minimize inefficiencies in the brand-consumer engagement method. We reduce cases of “solicitation” and turn them into mutual matchmaking and discovery. Finally, we need to cut out resources and dollars wasted traditionally through a network of middlemen and pass this value on to both sides, the consumer and enterprise.

These problems we are trying to solve all have something in common – they require decentralization of data, communication channels, and resources. Only by decentralization then 1-to-1 trust and relationships can be formed, and waste to be minimized.

Introducing



A blockchain-powered data and interactions exchange that passes value and data ownership back to the **consumer**, as well as increasing marketing effectiveness, data quality, and customer loyalty for the **enterprise**.

All transactions on the platform will use the CPX token.

Through the **Consumer Client App (CPX Wallet)**, the consumer has full-access over his/her data and can choose to share data and interact with brands and businesses that he/she is interested in, in exchange for offers, reward points, and cash prizes.



Consumer Client App
(Android & iOS)

Core Functionality:
Data permission control
Price and reward-setting
Offer and rewards discovery
Reward wallet (CPX)
Message Inbox

Smart Contract-Based Transaction



Fair Price/Reward Regulation

Through the **APEX module** of NEXUS, an enterprise Customer Data Platform built by Chinapex, business users are able to acquire rich, accurate, and compliant data from their target customers, cutting out unnecessary middlemen.

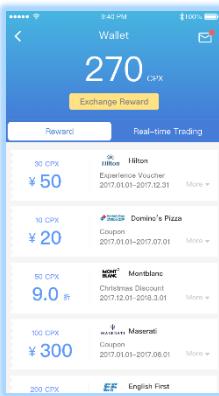


NEXUS
(Enterprise Client App)

Core Functionality:
Target data scope management
Cost management
Reward and offers management
External integrations management
Notification management

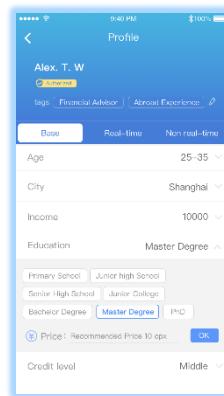
Consumer Client App (CPX Wallet)

The Consumer Client Application (CPX Rewards Wallet) is designed to pass the value back to the consumer whenever his/her data is used or is engaged by a brand, with consent and permission settings completely controlled by the consumer herself. Below is an overview of the basic functionalities of CPX Rewards Wallet (non-exhaustive).



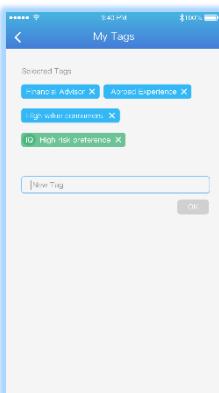
CPX Rewards Wallet

CPX accumulates over time depending on number of times data is accessed, richness of data dimensions accessed, how many and which types of engagement actions taken. The more brands the user gives permission to access, the more overall points. Points can be exchanged for rewards directly accessible via CPX Rewards Wallet.



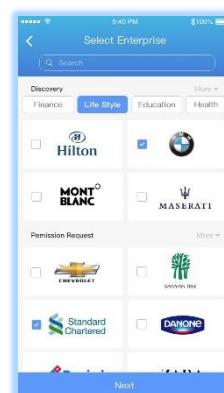
Data Settings

The consumer has complete control over which data dimensions selected brands are able to access. Data consists of self-supplied contact information, interest and purchase related tags, and real-time data from applications in our app partner network and browsing data (page titles and metadata). The user is able to set a target CPX cost for accessing each data point.



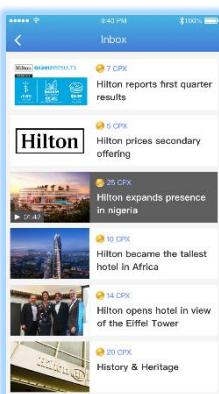
Tags and Attributes

Tag and attribute management is an easy way to enable the consumer to be accessible to more brands, implying more overall CPX accumulation. Brands set tags and attributes within the "Data Scope Management" functionality in APEX Enterprise App in the NEXUS platform.



Brand Discovery

Users are able to easily discover brands that they are interested in and allow them to access particular data and engage them in certain ways. Likewise, users that fall within target scope of certain brands will receive permission requests that they can choose to approve or ignore.



Message Inbox

Users will receive messages and notifications from their selected and approved brands with a CPX value attached. By opening and browsing a particular message, they are rewarded the indicated CPX value (typically much higher value than a data access request).



Message Details

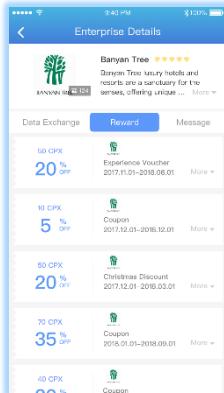
When a message is opened, the format is a combination of text and images/video. The content could be newsletter, promotion, or offer. Within the message there is functionality to nest further actionable engagements with CPX value attached, such as clicking a button that opens a URL or completing a registration or offer.



Rewards Discovery

Users are able to browse and discover rewards that they can acquire using their CPX.

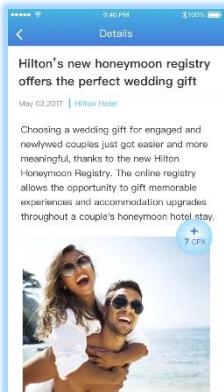
Rewards do not have to be from their approved brands as CPX can be used across the entire platform. This is also a way for users to discover brands that they can engage with to receive more CPX.



Brand Details

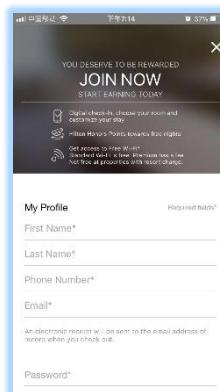
Users can discover new brands by exploring what types of rewards and offers it has, as well as average cost of data transacted with that brand. He/she can also manage the detailed data permissions set. Once the user approves/follows the brand, then he/she consents data usage and the receipt of messages.

Engagements and actions are not limited to within the CPX Rewards Wallet.



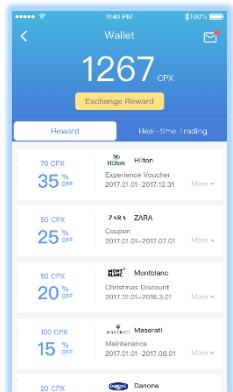
CPX Wallet
Message Inbox

Clicks on offer to complete action on brand's official site for certain CPX. Examples include user registration or a purchase.



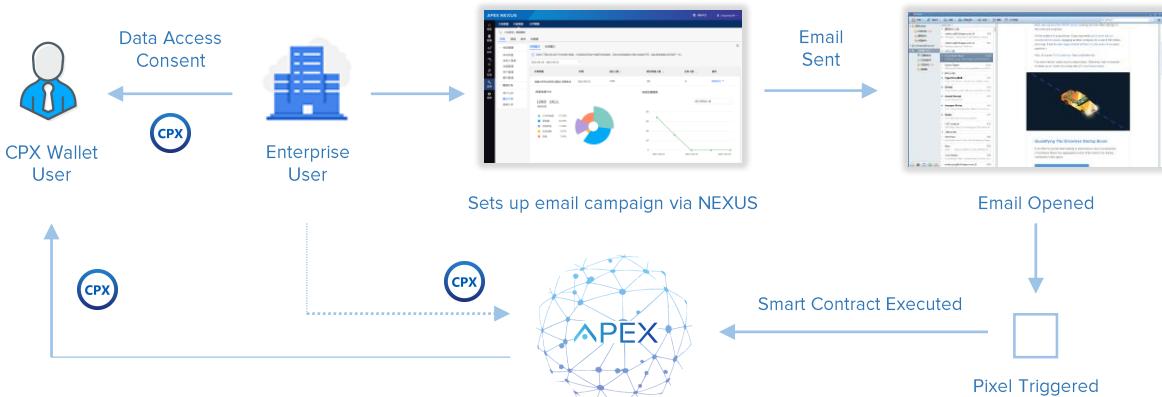
Brand Website
(Has APEX Enterprise SDK deployed)

Completes the task and receive the agreed upon CPX.

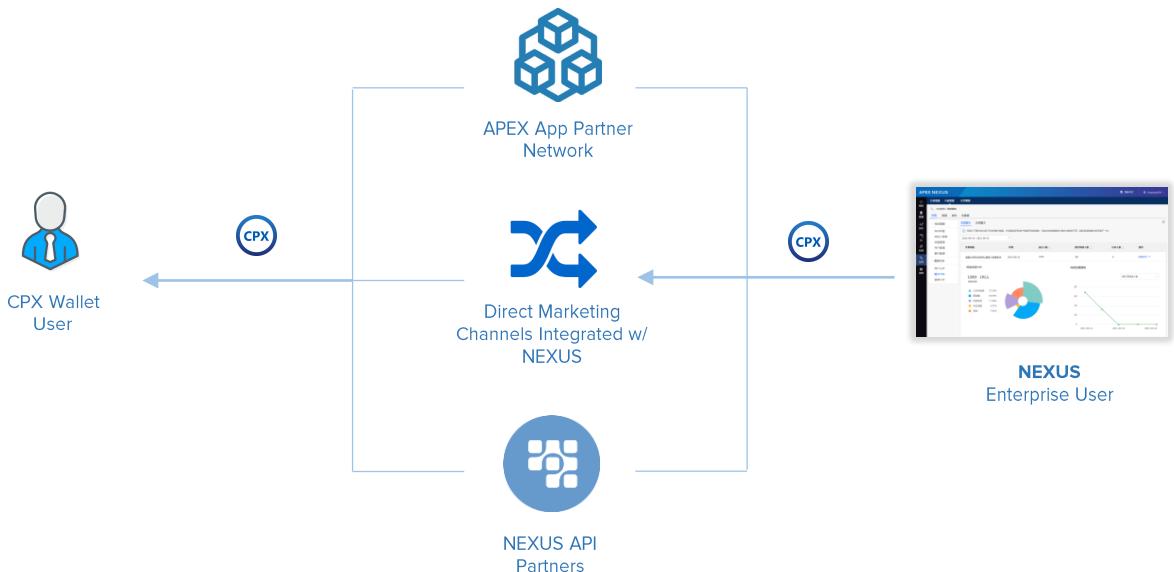


CPX Wallet
Wallet Balance

Consumer engagements can be accounted for outside of the APEX platform.



Once consumer users have setup their CPX Wallet accounts, they are able to interact outside of the APEX platform with the brands they have given consent to, all while continue to get compensated CPX for these engagements, given the channels of engagement are APEX SDK or pixel embeddable.



CPX Rewards Wallet Summary

- The user has a 360 degree view of his/her profile and data, with advanced permission settings on which select brands can access which dimensions of the data.
- There's various ways to scale the amount of CPX points accumulated, including
 - 1) by the number of brands that can access the user's data
 - 2) by the richness of the data accessed (which data fields are given permission to be accessed and the number of tags)
 - 3) Number of interactions taken by the consumer (number of messages viewed, number of interactions with CPX value attached)
 - 4) by various indicators of conversion or loyalty (signups, purchases, renewals, etc) customizable via APEX Enterprise SDK
- This channel of engagement is non-intrusive, builds a 1-to-1 relationship with the consumer, and passes the value back to the consumer instead of middlemen networks and platforms.

Enterprise Client App (NEXUS)

The Enterprise Client Application is the APEX module within NEXUS, an existing enterprise customer data platform with over 250 enterprise users. The Enterprise Client App enables the brand to manage target customer scope, data acquisition scope, cost management, rewards management and management of messages and engagements.

Target audience management

Data scope management

Cost management

Rewards management

Message management



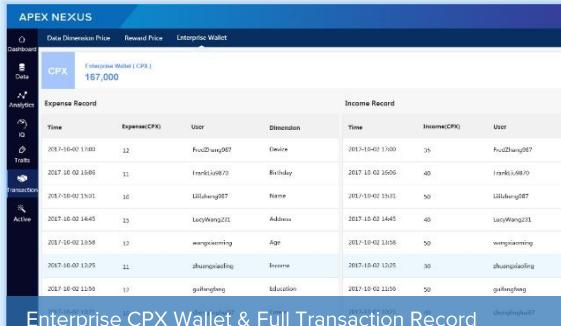
NEXUS
 Enterprise Customer Data Platform

Core Functionality:

- Data collection and integration
- Data analytics
- Customer 360 view
- Machine Learning & AI
- Data Activation
- Marketing Automation

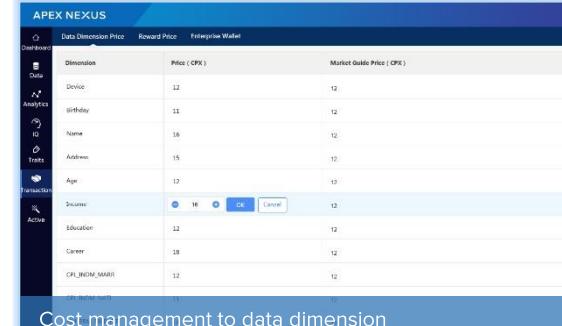
Dimension	Price (CPK)	Reward Price	Enterprise Wallet
CPX	Enterprise Wallet (CPK)	167,000	

Enterprise CPX Wallet & Full Transaction Record

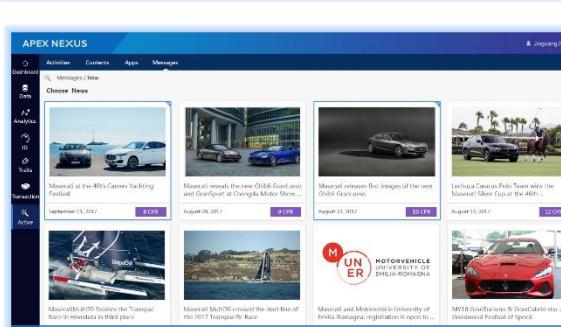


Dimension	Price (CPK)	Market Guide Price (CPK)
Device	12	12
birthday	11	12
Name	18	12
Address	15	12
Age	12	13
Education	12	12
CPI_NOM_MARII	12	12

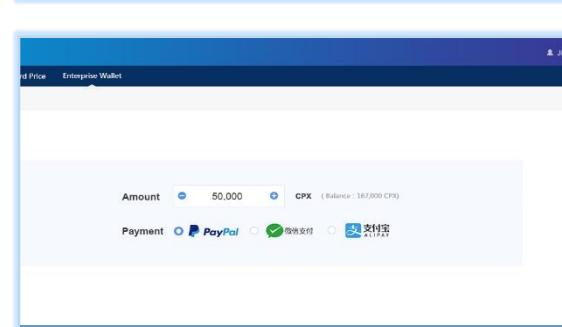
Cost management to data dimension



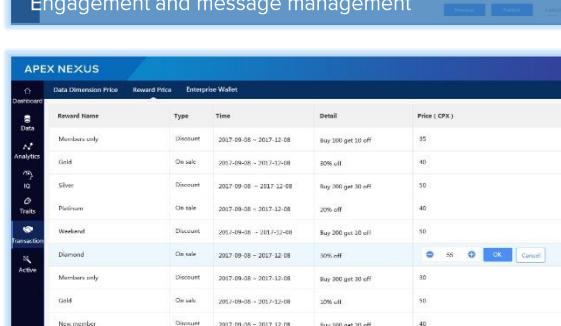
Engagement and message management



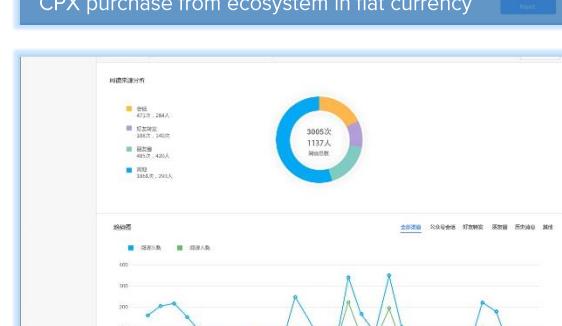
CPX purchase from ecosystem in fiat currency



Rewards management



Real-time analytics



NEXUS Core Capabilities

By using the APEX Module of NEXUS, brands not only have access to a APEX's data and value exchange ecosystem, but are able to manage, analyze, and activate the data using NEXUS's suite of robust capabilities. This enables enterprises to easily augment the value of data acquired via APEX, empowering them with insights and technology to better engage and serve their customers.

Rich, high-quality data and the ability to form new 1-to-1 engaging relationships with new customers, combined with robust analytical and machine learning firepower enable businesses to obtain a next-level data-driven competitive advantage.



Data Collection & Integration

- Real-time data ingestion from PC/mobile sites, APPs, and IoT devices
- Seamless rule-based data integration and unified customer ID without writing any code
- Freedom and complete control over data, includes developer tools and SQL terminal

Real-time advanced analytics

- Near real-time analytics – see latest customer behavior and custom triggered events
- Multiple analytics models including event analytics, customer journey analytics, funnel analytics, and marketing attribution models
- Turn insights into real-time action through integration with external marketing and personalization tools.



Productized Machine Learning & AI models

- Productized machine learning models for marketing, personalization, and deep customer insights.
- Models include linear regression, logistical regression, bayes, K-means, random forest, neural network, RFM, NLP (content classification), NLP (sentiment analysis), churn prediction, deep learning neural network, ARIMA, and more.

Machine learning insights to action

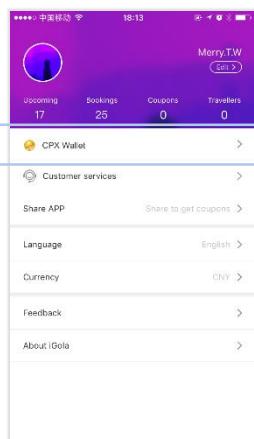
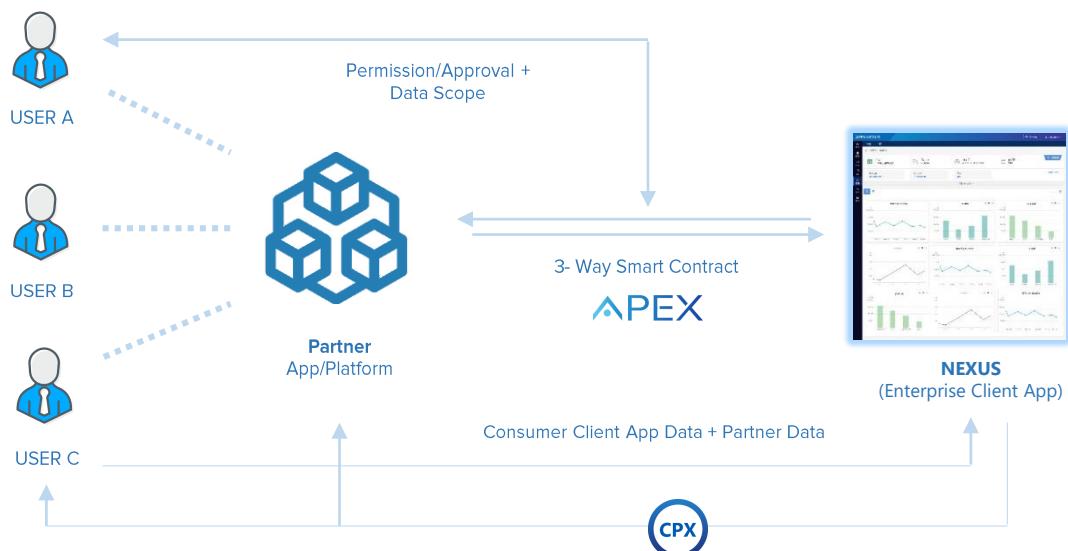
- Create new customer segments based on results of machine learning models
- Drill down to individual customer data level with customer details, customer journey, and customer scoring.
- Use insights and segments directly in marketing campaigns, product recommendations, and push notifications.

3. Global Partner Network

APEX is a platform in which the bigger its ecosystem of consumers and enterprises, the greater the value. APEX will leverage a global app and enterprise partner ecosystem to rapidly scale simultaneously to generating direct traction with consumer and brands.

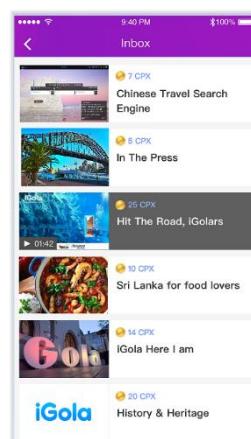
App/Publisher Partner Network

App and publisher partners are a part of the data and value exchange ecosystem, and can help easily scale APEX's consumer userbase, as well have an indirect impact on growth of the brand ecosystem. First, the partner deploys APEX's Partner SDK, which enables the partner's users to have access to the APEX Blockchain. Partial CPX Wallet functionality can be deployed within the partner's app (partner has freedom to customize via the SDK), and the users will have the permission settings for data sharing or receiving paid messages in CPX from third parties, facilitated by a 3-way smart contract between the user, partner, and brand.



Fast, seamless integration with partner apps

CPX Wallet will be non-intrusive plugin within the partner application. The partner will have a choice of using our native plugin (plug-and-play) or complete self-customization via our SDK. The user's profile and data permissions will be embedded within the partner app.



Connected to the APEX ecosystem

Once the SDK has properly been deployed, then the app partner is completely connected to the APEX ecosystem. It can reward its most valuable users CPX points to redeem within the app or within APEX's brand network. The app partner can also acquire new users from the APEX network using CPX points. Partners will also have their own NEXUS APEX Module account.

Vertical App Partner Examples



Red Pulse

Vertical: Financial Information

Red Pulse is a financial information platform for timely and actionable China financial market intelligence.



Jonathan Ha
Founder & CEO,
Red Pulse

"When scaling a B2C app platform, it's very helpful to be able to extend user incentives to an ecosystem outside of the app itself, as well as leveraging user data to as provide more value for the user herself. APEX does this in a fashion that puts the user consent and interests at the forefront."



Bongmi

Vertical: Healthtech

Bongmi is a female healthtech and mobile app company that offers IoT-connected health applications



Adam Lou
CEO,
Bongmi

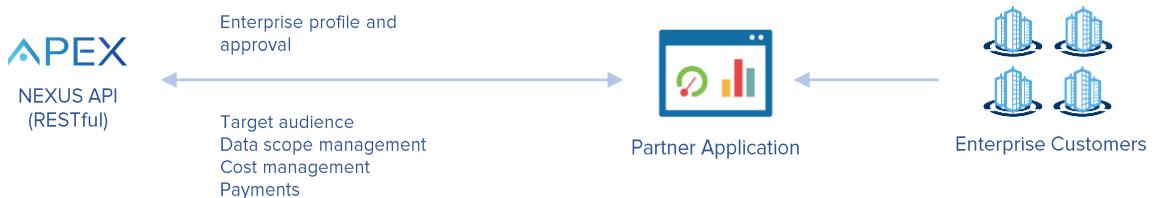
"As a hybrid IoT and mobile app company, we have rich and massive user datasets from all sorts of devices. Data analytics can only go so far to maximize value. To further increase user stickiness and lifetime value, I will need APEX to get connected with a bigger ecosystem of apps and consumer brands."

Enterprise Application Partners

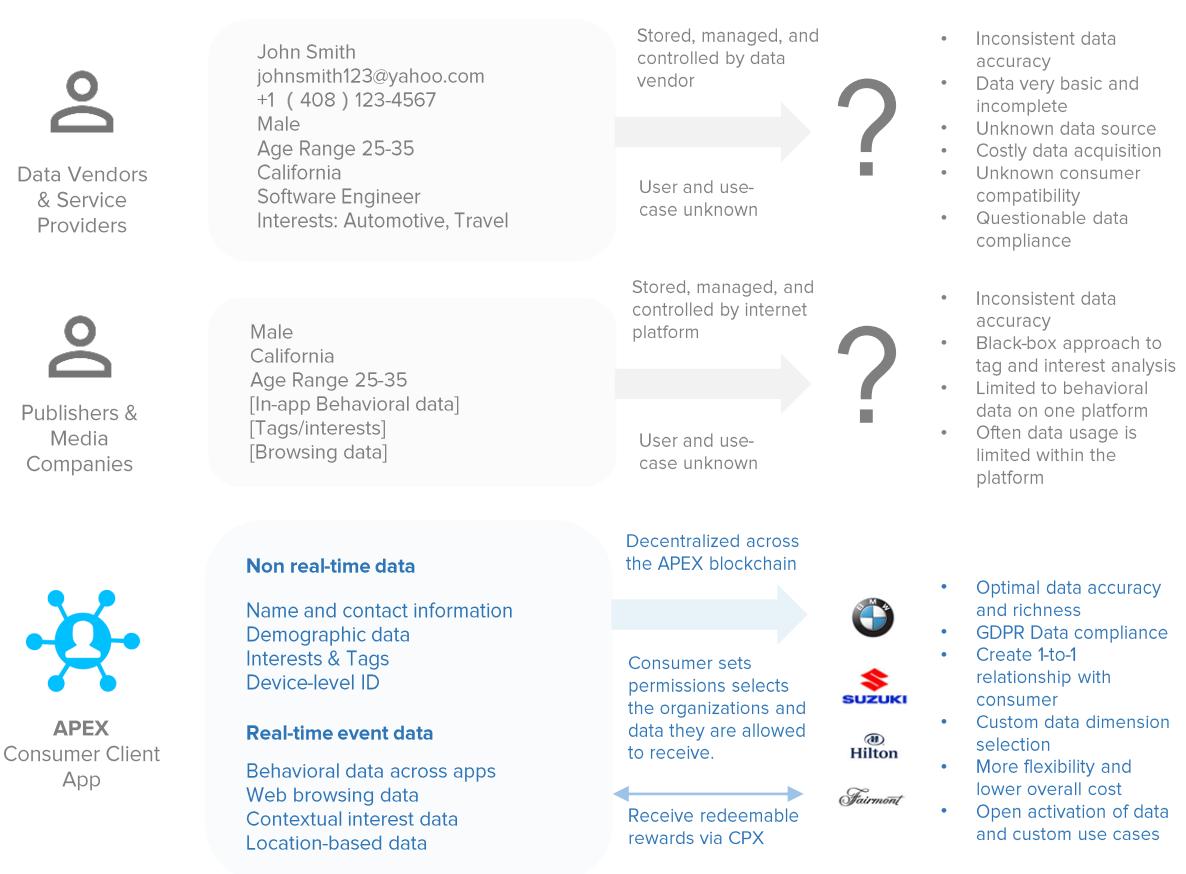
APEX will also develop an enterprise application partner ecosystem for the demand-side of data and consumer interactions in the second stage of our Global Partnership Network development plan (second priority after our app and publisher partner network). Enterprise application partners will be able to leverage the NEXUS APEX Module API to embed particular capabilities surrounding APEX transaction management within their own application or platform, enabling their enterprise customers to access the APEX Network.

The enterprise application partner network will help further scale APEX's brand ecosystem. All partners will be thoroughly vetted against criteria that ensure fitness and value-add for the platform ecosystem. All enterprise users through the partner's application will require a information submission and approval process. The NEXUS APEX API is not intended to have full functionality as NEXUS APEX Module.

APEX's enterprise application partners will mostly consist of marketing technology, marketing automation, and data analytics vendors.



4. Comparison with Other Solutions



Comparison with Existing Data Exchanges

	APEX	Blockchain Data Exchange	Non-Blockchain Consumer Data Exchange
Exchange Model	B2C	B2B	B2B
Transaction Model	Decentralized	Decentralized	Centralized
1-to-1 Consumer Consent	Yes	No/Indirect Consent	No
Consumer Engagement	Yes	No	No
Value Exchange	Yes	No	No
App Partner Ecosystem	Yes, Partner SDK	No	Publishers, Data Only
Tokenization	Yes	Yes	No
Focus/Use Case	Consumer Data, Marketing & Loyalty, Rewards & Value	A variety of use cases not specific to consumer data	Consumer Data, Marketing
Built-in Data Management & Analytics, and AI	Yes	No	Limited
Examples		GXB	Exelate

5. Why CPX?

Why Blockchain?

Blockchain is a natural fit for APEX due to the problem it's trying to solve - building an open ecosystem in which trust and consent are the building blocks, and information and value are exchanged across the ecosystem without centralized middlemen. Another fundamental element in the ecosystem is fair and mutually agreed compensation between multiple parties for value acquired through the APEX Network.

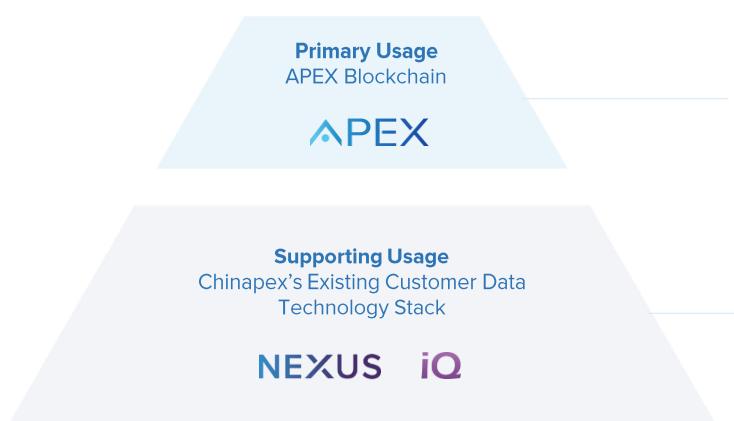
60%+

Of our enterprise customers feel that a blockchain-based network that uses credits/tokens native to the platform for transactions is suitable and valuable for this particular use case, and would consider adopting given cost and ease of use is reasonable.



CPX-to-Value

The CPX token will have flexible to-value routes, not just via APEX. It can also be used as SaaS data management and analytics (NEXUS) and machine learning and AI service (IQ) usage credits, which serves as a strong baseline value foundation for the token.



Primary use case of CPX will be transactions on the APEX Blockchain.

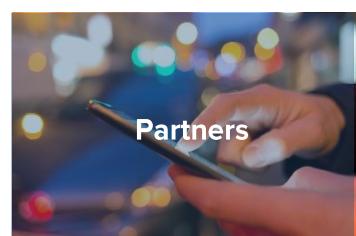
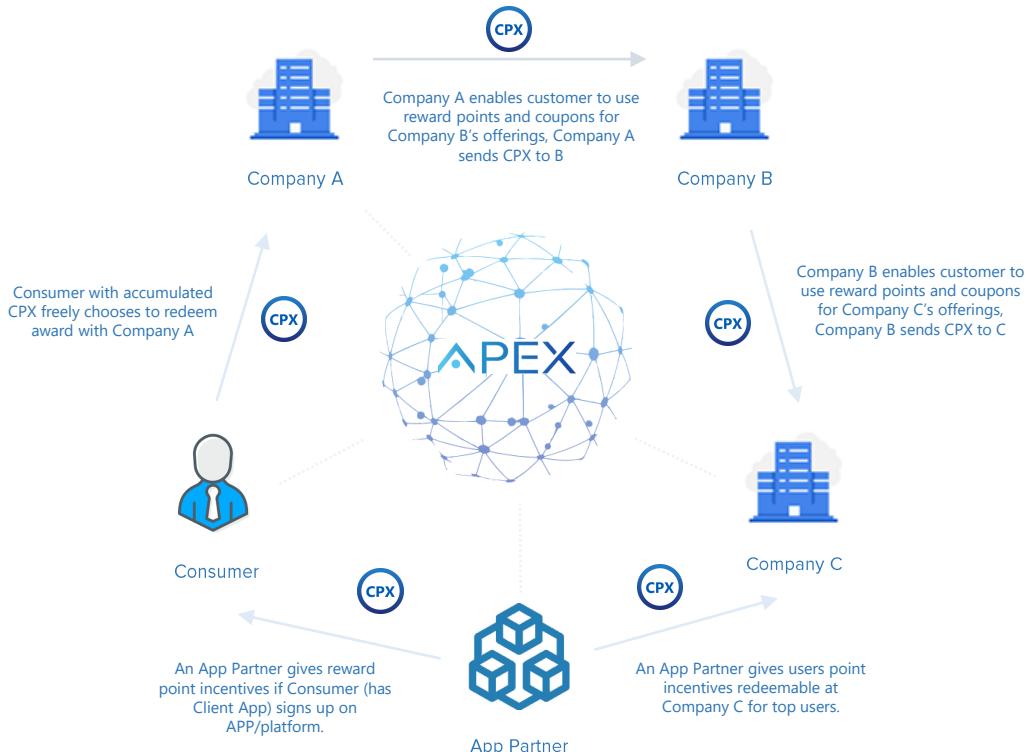
CPX can also be readily converted into value by being exchanged for usage of existing Chinapex products with various fee models:

- Pay as you go (By data usage volume)
- Pay as you go (By marketing usage volume)
- Annual licensing

All product usage purchased using CPX will have a 80% discount (compared to cash purchase, CPX amount based on CPX token USD price at the time of purchase)

6. Information and Value Exchange Infrastructure

APEX not only serves as a next generation consumer data exchange, at a bigger picture it acts as an exchange of information, value, and interactions between not just brands and consumers, but the entire larger ecosystem, including transactions between brands and partners. It does this with a common underlying protocol of mutual agreement and trust, helping easily facilitate the sharing of value and creating synergistic relationships.



- Increased data awareness, control, and transparency
- Discover and redeem new offers and rewards
- Get compensated for attention and engagement in CPX

- Acquire new customers efficiently and create new 1-to-1 relationships
- Acquire customer insights
- Increase customer loyalty
- Create new sales channels and partnerships

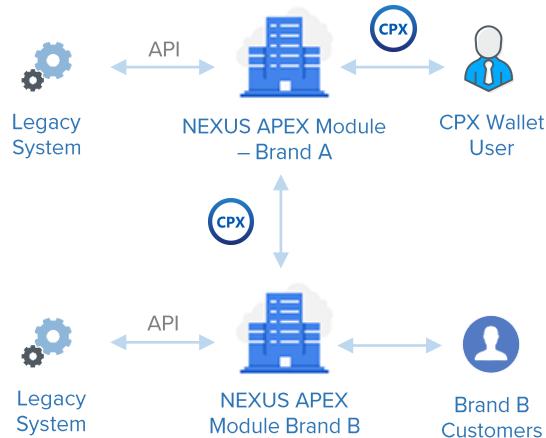
- Increase user loyalty and stickiness by allowing access to rewards ecosystem
- Monetize data assets
- Easily create new commercial partnerships

Reward Exchange via Legacy Systems

There are 2 types of rewards that can be redeemed on APEX – rewards that are specific and/or unique to the APEX platform, or an existing reward on a legacy non-blockchain based internal rewards system. Rewards specific to the APEX platform can be transacted easily via CPX, and rewards linked directly to internal legacy systems will require a RESTful API integration.

Rewards Approval Process

- Integrate legacy system via RESTful API
- Create and setup reward on NEXUS APEX Module, including setting CPX cost
- If reward is based on legacy system, configure redemption mechanism via API
- Submit for approval (See regulations section for more information)
- Reward goes live
- Audits on periodic interval

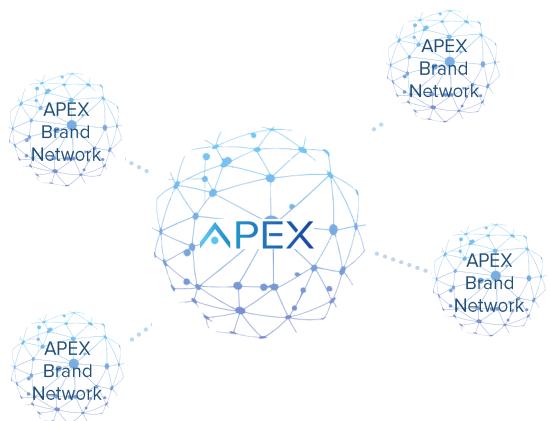


Onto a Blockchain Future

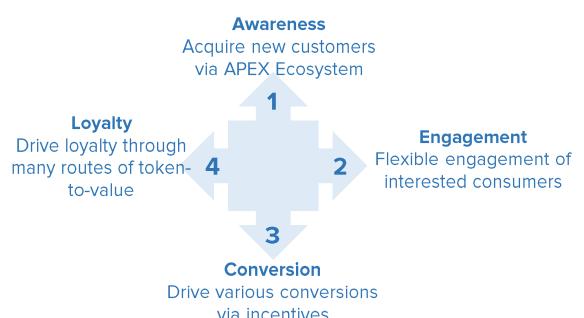
We see the blockchain is an efficient system for facilitating exchange of information and value between consumers, brands, and applications, and undoubtedly is the future of brand-consumer interactions, marketing, and loyalty. APEX is one such platform that is built to scale and connect a growing open ecosystem.

An interesting observation is that an enterprise's or brand's own internal loyalty network resembles a smaller scale APEX in terms of number of participants as well as functionality.

So naturally, once the APEX ecosystem grows to a certain scale and achieves a certain amount of enterprise adoption, the Chinapex and APEX team will consider releasing a private chain solution based off of APEX for enterprise internal use within its brand and customer network, having the potential to replace legacy systems and having its own unique token.



APEX helps brands maximize customer value across the whole customer lifecycle, not only from a rewards and loyalty point of view, a clear advantage over legacy systems.



7. Ecosystem

Target Audience

The drivers of the APEX ecosystem will be mainly 3 target audience groups, each with its own unique value add and synergy within the platform.



Consumers

Age 22-40, male & female, smartphone users with medium and medium-high income, digital saavy
(demographic may vary by country and region)



Partners

Mid-volume news, content, or commerce related apps with DAU over 20,000. Vertical-related content apps also eligible (automotive, lifestyle, finance, health, etc)



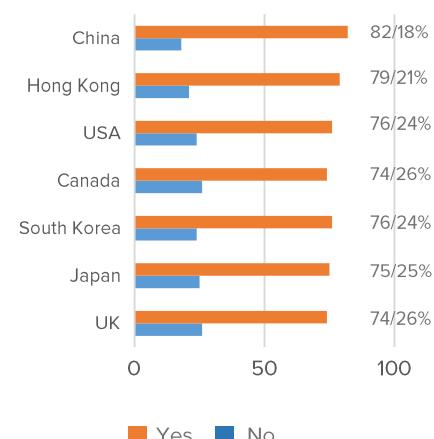
Brands

B2C mid to large brands in verticals travel, financial services, FMCG, automotive, lifestyle & fashion, retail, e-commerce, OTC pharma, consumer services, and education.

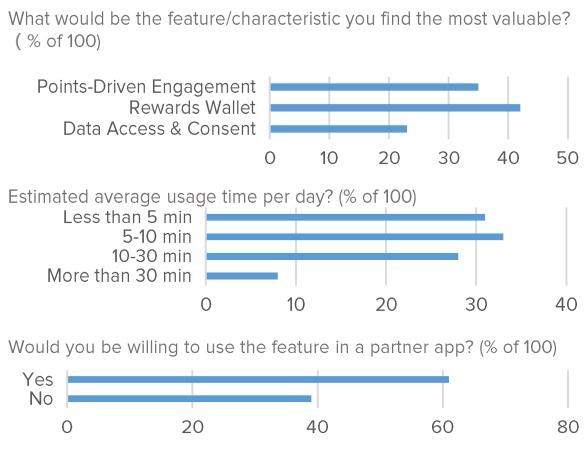
We hired a boutique market research and survey firm based out of Hong Kong to conduct a quick study across several countries – Mainland China[300], Hong Kong[100], United States[200], Canada[100], Japan[100], South Korea[100], and United Kingdom[100]. (Number in brackets indicates the sample size, not all future target geographies are covered, all participants were given preliminary information and briefing). All participants have been selected to fit the target consumer demographic profile.

Below are a summary of the results:

Given the information provided, would you use a rewards wallet app as such?



Of those that answered yes:



Growth & Scaling Mechanisms

There are various growth levers that can easily help the ecosystem achieve increasingly larger scale – as the ecosystem grows, the amount of value obtained by the main participants are amplified via network effects.

Token Driven

A initial batch of tokens (25%) will be reserved for growing the platform and ecosystem. The initial selected group of brands and app partners will receive a set of tokens for free, as well as the first group of consumer participants. Initially, APEX will work with the brands to provide low CPX redeemable coupons for the first batch of consumer participants to further ease growth and platform usage.

Partner Driven

The early partner app network will also drive low-friction consumer-side adoption. APEX will work with app partners to make integration and enabling users to participate in the APEX ecosystem as simple and hassle-free as possible. Enterprise App Partners will also drive brand-side adoption, though we plan to leave Enterprise App Partners for stage 2 of the partnership development plan.

Rewards Driven

Tailoring APEX-specific rewards not offered elsewhere will help drive the Consumer Client App's (CPX Reward Wallet) adoption. There's various cost-effective marketing and social media channels that enable new user acquisition by anchoring rewards redeemable after signup. APEX will work with brands to tailor such rewards – brands who do so will also get awarded via commercial agreements such as increased initial CPX.

Brand Driven

If the APEX platform is deemed by a particular brand as a valuable platform for engaging and communicating with target customers, it may be a good idea to move more customers, fans, and target audience onto the platform.

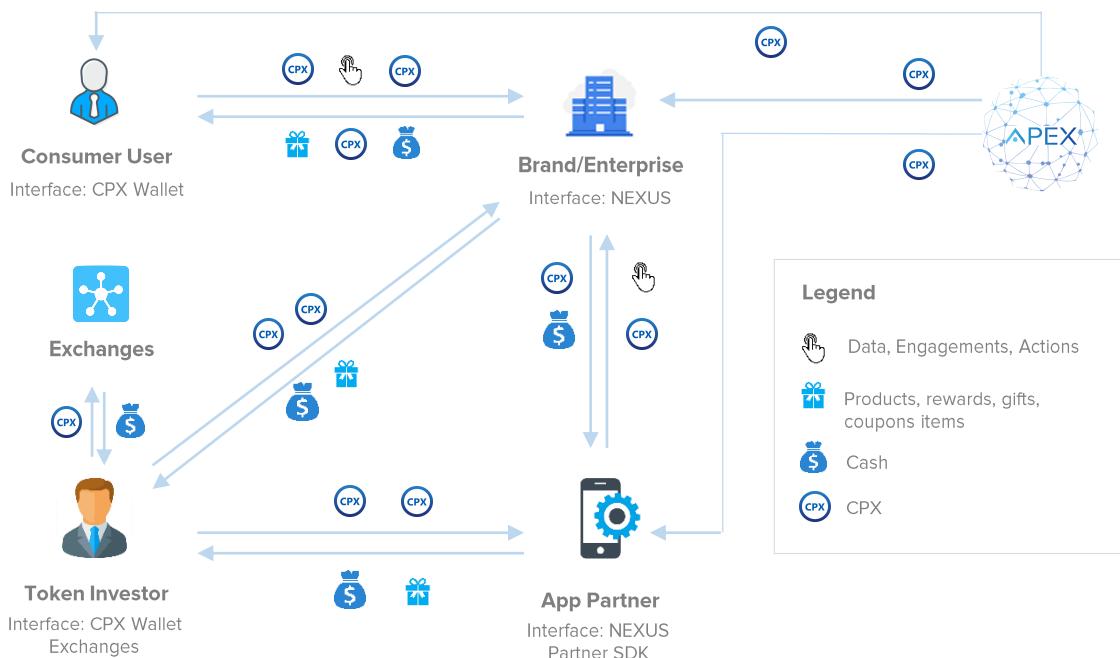
Geographical Expansion Plan

The APEX and Chinapex team have a specific expansion plan for scaling the platform across different geographies. The plan aims to optimize a combination of efficient growth and expansion as well as product market fit. The roadmap section of the whitepaper has particular expansion activities in more detail.



Token Dynamics

The ecosystem is expected to have rather fluid token dynamics in which all parties involved can readily exchange CPX for value. There are four types of transactions across the ecosystem 1) CPX for value (products, rewards, gifts, coupons) 2) CPX for cash 3) CPX for data, interaction, and action.



CPX to Cash

A CPX to cash functionality will be built-in within CPX Wallet to enable monetization from CPX holders (consumers and token investors) to CPX users (mainly enterprises and app partners who need to use CPX for practical marketing purposes) that are a part of the APEX ecosystem. CPX holders are able to specify what CPX amount to convert to cash and it will be put into a queue based on time requested and priority type. Token investors will generally be given the highest priority given the same timeframe of request. There will be a daily CPX monetization limit through CPX Wallet, and brands/enterprises will not be able to access this monetization feature through NEXUS.

For processing the CPX to cash transaction, APEX and Chinapex may initially centralize the processing (hold CPX and cash both using an escrow protocol set for release at same time) for purpose smooth and timely delivery of the feature. As the volume of CPX-to-cash type transactions increase on the APEX platform, we utilize a decentralized approach as well as increase the number of currencies (and cryptocurrencies) CPX can be converted to.

Business Model

It's important to note our approach of building the APEX platform and ecosystem. Our priority is speed-to-market and speed-to-traction while ensuring a solid technology foundation. Our goal is not just to build a data and value exchange protocol, but a quick-to-value solution that can be readily adopted by any consumer, enterprise, or app partner that have little to no understanding of how blockchain works.

Approach

Growth of the ecosystem as priority

Various decisions surrounding product design, marketing strategy, brand selection, and partner development will be centered upon optimal growth rates of the brand, consumer, and app ecosystem. The nature of the ecosystem is one which incremental scale delivers amplified value via network effects. Our goal is within reasonable scope remove as much friction as possible in between the participants of the ecosystem and their adoption.

A productized platform, not just a protocol

We aim to build full solutions with great user experience and ease of use, with rich application-level functionalities, not just a protocol or mechanism layer. Though APEX is an open ecosystem with a robust API giving partners the freedom of customization, it should also satisfy the participants of the ecosystem that want simple tools that can deliver value quickly.

Robust synergies with existing offerings, technology, and customer base

The APEX platform will leverage the existing brand customers, technology, and strategic partners of Chinapex to bring maximum differentiated value to the platform. Our existing customer base brings quick brand-side adoption and quick onboarding process; our existing technology suite (NEXUS + IQ) easily extends the value of data and engagements transacted on the APEX platform through data management and AI, augmenting the value of what can be achieved blockchain technology alone; our existing strategic partner ecosystem supports the platform in terms of infrastructure, data, app partners, and users.

Revenue Model

Value-added technology licensing (primary)

With the APEX ecosystem, Chinapex becomes one of the most differentiated consumer data technology companies in the space. Instead of the main revenue model being from getting a cut of value that flows through APEX, we'd like to conserve the value for the consumers and brands, and instead offer existing robust technologies such as NEXUS and IQ either 1) to augment the value of data and engagements acquired through APEX 2) for existing users of NEXUS and IQ, APEX augments the value of these two technology products.

Transaction fees (secondary)

APEX will charge a 5% transaction fee off of all purchases of CPX tokens by business users (brands + apps) through the APEX ecosystem. The transaction fee will be deducted directly from their enterprise CPX account. APEX will directly use this token revenue for 1) fueling ecosystem growth 2) reserve tokens potentially for resale.

8. Platform Regulation

As with any platform in which value is exchanged, existing transaction protocols are often not enough to ensure fairness, non-abuse, and maximal healthiness of the ecosystem. Additional regulation protocols will need to be put in place in order to ensure all parties' interests are being protected and remain balanced.

Data Accuracy and Non-Abuse

APEX is built with the consumer's rights and privacy at the forefront and aims to create a healthy and mutually beneficial ecosystem, but there will likely be those who try to abuse the system for the sole purpose to gain rewards and benefits, at the enterprise and brand's cost.

Data Verification

The APEX team will embed off-chain data verification protocols within CPX Wallet, which the user would need to go through in order to receive full value of CPX for any data or engagement transaction. Verification will be through an API provided by third party consumer identity verification vendors – for different geographical locations, APEX will employ different vendors. (For example in China there are ID verification API services such as Ant Financial's Consumer Data Verification Service). Selection of specific vendor will be determined by APEX team and depend on a combination of functionality and price point. A CPX amount that is certain to cover verification cost will be deducted from the user's CPX Wallet - the actual transaction cost will be calculated at month-end upon APEX's payment to the vendor, and any excesses will be returned to the user's CPX Wallet. Non-verified users will receive 20% equivalent of full CPX value.

Anomaly Detection via Machine Learning

Applications of machine learning algorithms surrounding user behavior is one of APEX and Chinapex's technology team's strengths. User behavior risk and anomaly detection is an existing model within APEX IQ's deep learning library and will be tweaked and optimized for use on the APEX platform to detect deliberate behavioral and usage anomalies. Relevant usage behavior for risk analysis will be collected and stored off-chain – this part of the data processing and analytics cost will be covered by APEX and Chinapex.

Fair Cost and Rewards

There are two main types of transactions on APEX – 1) consumers receiving CPX for data and engaging in content 2) brands exchanging rewards with consumers, other brands, or partners. Fair cost-setting of both data, engagement, and rewards will require both mechanistic regulatory protocols as well as ecosystem participation.

Consumer CPX Rewards

As consumers are able to set desired cost range for data access within CPX Wallet, ranges that are unregulated may result in a stalemate situation where no transactions ultimately occur. Therefore, accepted data usage rates will be auto-regulated by the APEX platform. The accepted rates will depend on a combination of ecosystem market dynamics (also localized market dynamics within a particular geography) as well as CPX cash value at that point in time.

As for consumer engagement in exchange for CPX, as seen in the CPX Wallet inbox functionality, costs will completely be set by the brand. The current consensus is that these will not require regulation as the consumer has complete control and choice of whether or not to partake in the engagement and is secondary feature to data access.

Reward Value-setting

APEX has an approach of regulating CPX reward values that suits the APEX ecosystem depending on the stage of growth. The goal is at any point in time is enabling the system to be as fair, efficient, and healthy as possible for growth.

Stage 1 – APEX Regulated:

At an early stage in the platform's growth, APEX will focus on the quality of brands and rewards, and will aim to bring on brands that have optimal benefit for the growth of the platform. At this stage, the control of the brand onboarding and rewards creation process will be regulated by the APEX team. APEX team will have the best immediate understanding of the initial consumer userbase and will determine whether a particular reward's CPX is fair and beneficial for the ecosystem.

Stage 2 – Community Regulated:

Once the enterprise and consumer userbase has grown substantially, there will be complexities introduced with variety and sheer number and scale. At the same time, the consumer user community will have a better understanding of the ecosystem and their personal needs and preferences. At this stage it would be inefficient to have APEX as the authority over rewards regulation. The good news is the blockchain is very suitable for community-based consensus and voting. The APEX team will design a protocol that identifies the highest rated and trustworthy model-users within the APEX consumer community to join a consensus committee to help with the regulation of fair rewards.

This consensus committee will be directly accessed by these selected users in future version of CPX Rewards Wallet. The APEX team will continue to retain partial voting power in stages, starting with 40% and will decrease eventually to 10%.

9. Technology Considerations

Blockchain Technology (NEO)

The APEX blockchain's smart contract system will be built using open source blockchain framework NEO, and the CPX token will be a NEO NEP-5-based token.

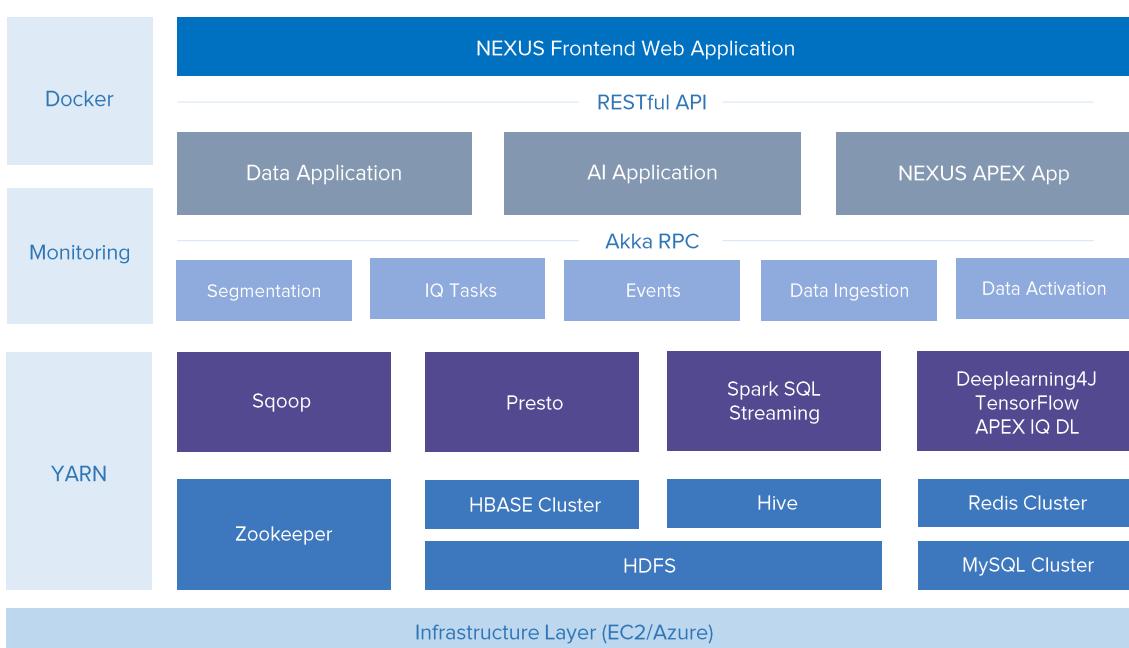


We chose the NEO technology framework for various reasons. NEO uses newer technology than Ethereum and has quite a few technology improvements. For one, the consensus mechanism NEO uses is dBFT, which increases efficiency and performance significantly over Ethereum's PoW mechanism. More importantly, NEO's unique built-in identity resolution capabilities (not available on Ethereum) can be useful for APEX's long-term development. (In the short-term we will use off-chain data verification APIs, but in the long term decentralized identity verification through the NEO ecosystem could be a good approach). Various other benefits include supported development using Java and C# (soon Go to be supported) as well as quantum-proofing.

On-Chain and Off-Chain

For the purpose of building out the capabilities of the platform in a manner that maximizes ecosystem growth, there are functionalities that should be built on-chain and others initially off-chain and eventually on-chain once it makes sense and/or when those capabilities become available through NEO (such as identity verification/resolution). Any mechanism that involves exchange of value or any functionality that is consent-driven will be executed on-chain. Any application business-logic related features such as storing application data will either be on device (for CPX wallet) and on the cloud (for NEXUS). Any data analytics for both mobile applications as well as enterprise-side use will be executed on NEXUS's existing tech infrastructure (AWS + Azure).

NEXUS Off-Chain Technology Architecture



10. The Company behind APEX

35+

R&D Team

200+

Global + China Enterprise
Customers

47 Billion

Data points processed
Annually (2017)

360 Million

Unique consumer data
processed and analyzed annually

Chinapex is a customer data technology and AI company headquartered in Shanghai with offices in Beijing, Hong Kong and Silicon Valley. We combine cutting-edge big data, AI, and blockchain technology to tackle problems in areas of marketing, personalization, and customer analytics. We have served over 200+ mid to large global and China enterprises in sectors of finance, travel, automotive, retail, ecommerce, and real estate.

We have engineered an innovative and robust technology stack:

PRISM

Real-time data collection
infrastructure

NEXUS

Enterprise Customer Data
Platform

iQ

Enterprise AI & Predictive
Analytics



chinapex



Recognition and Honors



One of 15 out of 1000 companies selected for **Microsoft Accelerator Shanghai**. Microsoft Accelerator is the most selective accelerator in China.



2016 Standard Chartered's "Most Promising Technology Startup" Award, given to technology companies with innovative solutions for finance and fintech in areas of big data analytics and machine learning.

#19

Ranked number 19 on **2017 Top Big Data Technology Companies in China** (China Internet Weekly)

#22

Ranked number 22 on **2017 Top Artificial Intelligence Companies in China** (China Internet Weekly)

Core Management Team



Jimmy Hu
Founder & CEO

- Oversees a combination of strategy, product, and vision
- Built internal marketing analytics for Microsoft, multi-year Microsoft technology contractor
- China & Asia big data and AI market advisor for Gerson Lehrman Group and multiple US financial institutions
- Forbes China 30 Under 30
- UC Berkeley BS Electrical Engineering & Computer Sciences



Tiger Yang
Co-founder & President

- Manages day-to-day operations of Chinapex
- Managed multiple internal data analytics projects for Microsoft, Global Sources, and various other clients.
- Keynote speaker at marketing technology and big data conferences such as GDMS, iDigital, & CBIS
- China Internet Weekly "Innovative Leader of the Year Award", and "Person of the Year 2016"
- UC Berkeley BS Political Economy, Minor EECS



Richard Wang
CTO

- Director of Engineering @ Alibaba, managed a team of 30+ person R&D team
- CTO @ 360 Finance
- Team Lead @ Youku, Machine Learning
- Team Lead @ Microsoft
- Microsoft IT Pro Award and Future Star Award
- Software Engineering @ Autodesk
- Masters Computer Science from Tongji University



Robert Xu
VP Product

- Product Director @ Alibaba, big data analytics division
- Alibaba "Product Expert of the Year"
- Analytics and personalization recommendation system team leader @Sohu, one of China's largest internet platforms
- Director of big data products @ Emar
- Masters in Statistics from Renmin University w/ focus on Machine Learning

Technology and Operations Team

We have built a world-class team of passionate and talented individuals across engineering, product and operations that come from a variety of top technology and internet companies.



Advisory Team



Dr. Laurent El Ghaoui
Chief Scientific Advisor

UC Berkeley Professor,
Data Science
Founder, Kayrros
Founder, SumUp



Richard Wang
Advisor & Investor

Partner,
DFJ Dragon



James Chou
Business Advisor

CEO,
Microsoft Accelerator
Shanghai



John Lin
Business Advisor

Associate Partner,
Trinity Ventures



JC Xu
Advisor

Co-Founder,
Badwater Capital



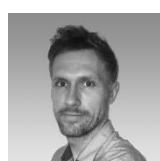
Kenneth Hsia
Advisor

Co-Founder,
Badwater Capital



Lasse Clausen
Advisor

Crypto Investor,
1KX



Christopher Heymann
Advisor

Crypto Investor,
1KX



Richard Li
Advisor

Co-Founder,
Alphablock
Investments



Paul Yang
Advisor

General Manager,
Oracle Marketing Cloud
China



Jonathan Ha,
Advisor

Founder & CEO,
Red Pulse



Henry Wu
Advisor & Investor

Managing Director,
Alacrity Canada



Wei Zhao
Technology Advisor

Director of Engineering,
AppDynamics



Lihua Yi,
Advisor & Investor

Co-Founder,
INBlockchain



Aaron Choi,
Advisor

Vice President
BTC China

Over 200 and growing enterprise customers in financial services, banking travel, automotive, retail, ecommerce, and internet sectors.

Our technology, infrastructure, and data ecosystem partners:



Our Offices



Huixin Tech Park
Building J, 1st Floor
192 Tianlin Rd,
Xuhui District, Shanghai



Guanghua SOHO
9 Guanghua Rd
Building B, 2F, R30
Chaoyang District, Beijing



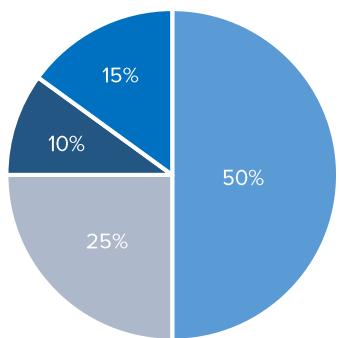
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5F Suite C2
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111 Deerwood Rd
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San Ramon, CA 94583

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11. Token Sale



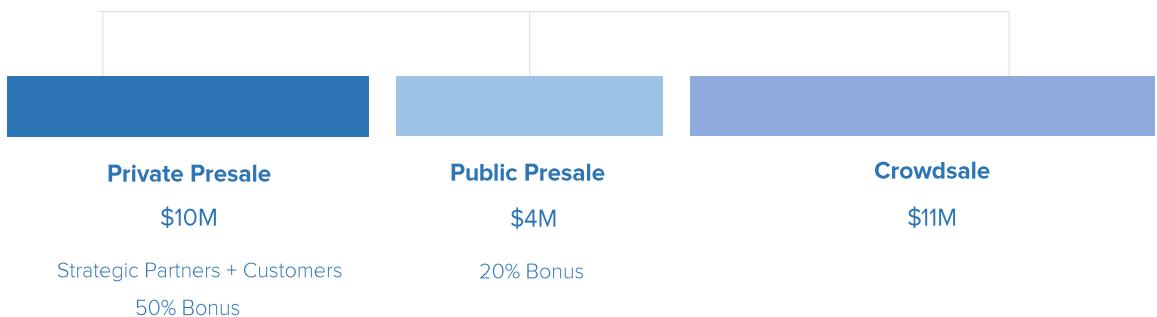
1 NEO: 1000 CPX

CPX Distribution:

- 50% Token Sale
- 25% Platform & Ecosystem Growth
- 10% Company Reserve
- 15% Team & Advisors

Token sale is not open to citizens of Mainland China
United States and Singapore.

Fundraising Goal: \$25M Hardcap



Token Sale Timeline

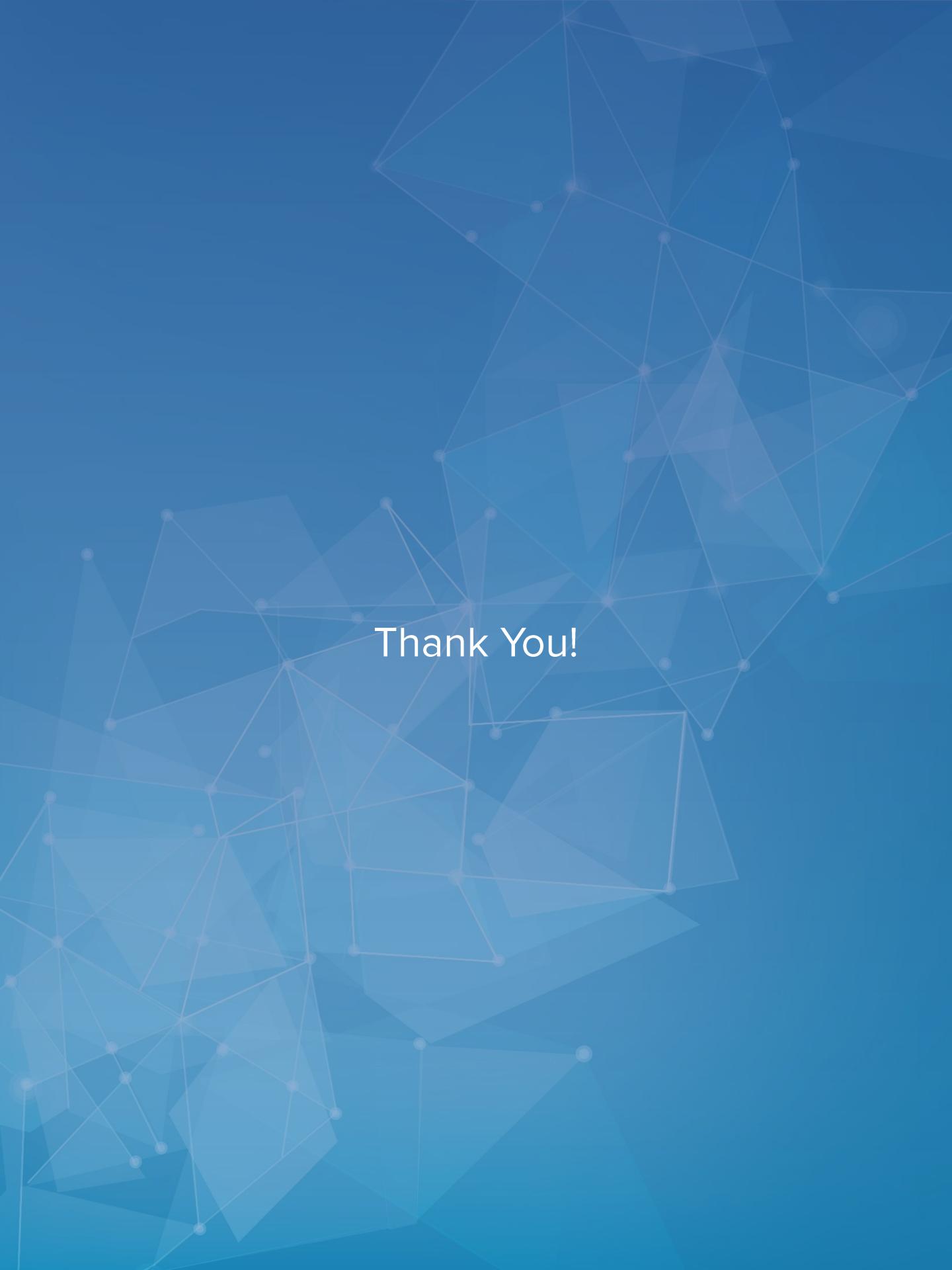
- **Private Presale** (Invite only)
Sold Out
- **Announcement**
December 15
- **Public Presale Start**
TBA
- **Crowdsale Start**
Late January/Early February
- **Crowdsale End**
Late February
- **Finish Token Distribution**
February 26
- **Start Trading**
Early March

Use of Funds

- 35% Research & Development
- 30% Marketing & Growth
- 30% Global Operations & Expansion
- 5% Advisory

12. Roadmap



The background of the image is a light blue color with a subtle, abstract geometric pattern. This pattern consists of numerous small, semi-transparent white triangles of varying sizes, creating a sense of depth and connectivity. The overall effect is reminiscent of a network graph or a complex crystal structure.

Thank You!