



The End-to-End Blockchain Solution
The Real Estate Industry Has Been Waiting For

CONFIDENTIAL AND PROPRIETARY

Whitepaper Draft
Version 1.8

NOTE: The contents of this Whitepaper are subject to change.



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1. The Opportunity

The real estate industry is poised for a technological leap forward that will deliver immense value to key stakeholders – buyers, sellers, mortgage lenders and government registries. There is huge scope to improve work flows and reduce costs because the basic steps for concluding any real estate transaction are repetitive, documentation is not fully standardized, transaction processes are antiquated as they operate on hard copy documents, and the sheer number of parties involved in any transaction drive inefficiencies on multiple levels. As a result, transaction costs can reach 10% or more of the total transaction value and the time required to complete the process can be very long, even excluding the time required to agree on a transfer price. And due to the large sums of money involved, the potential financial downside associated with a flawed process and documentation is huge.

These pain points are especially evident in cross border transactions which can suffer from a lack of standardization, lack of transparency, mountains of paperwork, risk of malfeasance, human error, incomplete or erroneous public records, and a host of logistical challenges associated with getting buyers and sellers together.

CryptoProperties LLC (“CPROP”, pronounced “C-prop”) is launching a comprehensive transactional platform for real property assets, with an initial focus on residential and commercial real estate. CPROP



is being designed to address the most common and major challenges intrinsic to all real estate markets in the world. CPROP's mission is to drive standardization, automation and validation in transactional real estate to enhance operational efficiencies, reduce costs, improve accuracy and reduce risks for all stakeholders. CPROP seeks to provide an end-to-end solution to allow property investors to research, transact with cryptocurrency, and reliably secure and record ownership, and eventually finance, their domestic and international property investments remotely. This blockchain-enabled platform will require users to pay fees for services and listings with a native token, the "MLS". Several structural design features will be incorporated to drive token value, including:

- There is no token float because CPROP is minting only a fixed amount of tokens. In order to purchase services on the platform, the platform will be designed to allow users to easily purchase tokens from the market to cover platform-related fees.
- The company plans to allocate 50% of its audited net profits annually to a token repurchase program. Tokens repurchased under this program will be burned.

As shown in [Table 1](#), global real estate capital flows and, hence, the addressable market for CPROP are enormous.

Table 1. Global Real Estate Capital Flows, 2015 (all figures in US\$ billions)

		Outbound Flows			
		N. America	Europe	APAC	Mid East
Inbound Flows	N. America	32	22	35	12
	Europe	75	68	24	16
	APAC	12	3	53	3

Total **intra**-regional capital flows = \$153 billion

Total **inter**-regional capital flows = \$202 billion

Source: "[Around the World in Dollars and Cents](#)", Savills World Research, 2016

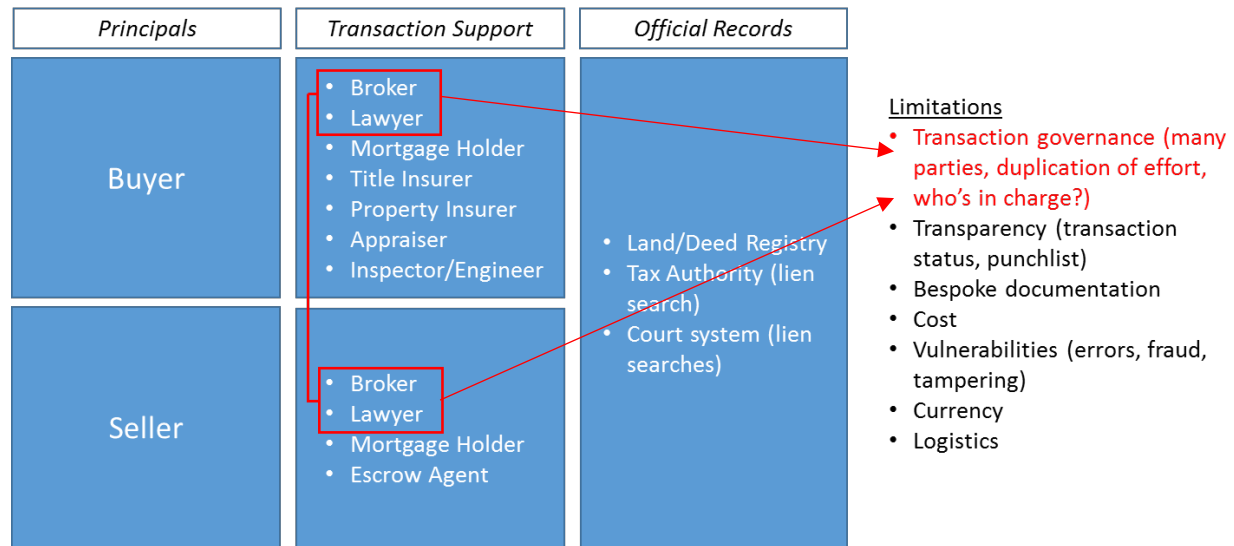
CPROP is being launched with the goal of capitalizing on this opportunity. The planned ICO is structured with a hard cap raise of \$35 million (see [Section 4](#) for further details).

2. Industry Pain Points

The real estate taxonomy can be complicated and suffers from a range of challenges as illustrated below in [Figure 1](#).



Figure 1. Real Estate Transaction Taxonomy



Below, industry challenges are segmented into three main categories.

2.1 End-to-end transactional inefficiencies and limitations

Aside from the need for a willing seller and willing and qualified buyer to agree on a price for a property, multiple transactional inefficiencies and limitations associated with closing the sale are pervasive, including:

- Redundancy** Multiple lawyers may be required to perform separate tasks which are mostly repetitive in nature from one transaction to the next.
- Risk of Defects** A variety of documentation-related defects can invade a real estate transaction, whether introduced through malfeasance (i.e., fraud, tampering and corruption) or human error.
- Antiquated Work Flows** Because of the reliance on hard copies, all parties to a transaction (e.g. buyer, seller, each party’s brokers, lawyers and banks, the title company, insurance agents, escrow agent, and relevant local government offices, etc.) have limited access to transaction-related documentation which can result in duplication of effort, documentation errors and a more time consuming, cumbersome and expensive closing process.



Unnecessary Risk Premiums	Title insurance is often required, especially by US mortgage lenders, to underwrite risks associated with imperfect titles and various types of liens adding an “unnecessary” layer of cost.
Closed Systems	Multiple Listing Services (MLS) generally restrict membership and access to licensed real estate brokers and agents which inhibits peer-to-peer (P2P) transactions.
Proximity Challenges	The buyer and seller may need to be in the same physical location to sign hard copies of closing documents creating logistical challenges and added cost.
Currency	The buyer may experience difficulty accessing and paying the purchase price in the seller’s currency of choice. ¹
Misunderstandings	There can be a heightened risk of misunderstanding among the parties due to the buyer’s unfamiliarity with, lack of proximity to, or inability to read or speak the language of the seller’s jurisdiction.

2.2 Imperfect title documentation and the high cost of ensuring property rights

Perfecting title can be tricky business, even in industrialized countries such as the US, which relies on title insurers to protect lenders against title defects and from the invalidity or unenforceability of mortgage loans and other industrialized countries which rely upon national registry systems. Elsewhere, establishing and maintaining title to property can be precarious due to weak administrative and legal systems which can be further challenged by reliance on paper-based recordkeeping as well as corruption, fraud and tampering.

All this could change with the adoption of blockchain technology. In 2016, Vermont became the first state to approve the use of blockchain technology to verify and authenticate records and information admissible in a legal proceeding. While the commercial impact of this new law has yet to fully emerge in Vermont, the state has recognized the relevance of the technology for authenticating property records. As stated in their analysis “[Blockchain Technology: Opportunities and Risks](#)” published on January 15, 2016: “... a transaction that has been verified and added to a valid blockchain is mathematically secure. The hash of a document existing outside the blockchain and the hash registered within the blockchain will be identical if the documents are identical. If the documents are different (due to forgery, corruption, error, or other problems) the hashes will not match. Thus, the blockchain can potentially

¹ As an example, China temporarily tightened controls on outbound foreign investment by Chinese nationals toward the end of 2016 amid a weakening of the Chinese economy and currency. This was significant in light of the fact that China is the largest source of cross border real estate investment flows which exceed \$20 billion annually. At the same time, Chinese investors have difficulty converting their bitcoin wealth into real assets such as property by limiting the amount of money Chinese citizens can send abroad, which is currently capped at \$50,000 a year.



provide an immutable registration of a record, to which future records can be compared for authenticity.”

Financial losses resulting from errors, fraud and tampering are pervasive and significant. For example, the UK’s Land Registry paid out £26 million in compensation to victims of property title fraud in a scheme where thieves took out mortgages on properties they did not own, pocketing the money and leaving the real owners in debt. The problem grows far worse in countries without well-developed/maintained property registry systems and robust legal frameworks.

The Internet makes promotion of fake properties easy. Forgeries are also easy and prolific. Blockchain can effectively make forgeries and false listings a thing of the past because digital ownership certificates for properties, which are almost impossible to replicate and are directly linked to a unique property, are created and saved on an open ledger. With blockchain, all information necessary for a transaction is stored in the database and is accessible for both the buyer and the seller, as well as their respective service providers. A digital ID is created for each buyer and seller, as well as for the real estate asset. This makes the mortgage process and transfer of ownership more seamless, faster and far more secure than what it is today. Additionally, price histories can be followed through the blockchain and digital identities of properties could help track the chain of ownership while also keeping track of major repairs and refurbishments to the extent those improvements are publicly documented, such as by the issuance of a permit.

Blockchain is not likely to replace government registries in the near-term, rather, it can make governance of land registration as transparent and corruption resistant as possible. Over time, as governments build experience and confidence in blockchain registries, legacy systems can be expected to be replaced by blockchain registries. Further, in jurisdictions where the durability and accuracy of public records is called into question, it is CPROP’s belief that property records anchored in the blockchain will gain acceptance by the courts as admissible evidence in legal proceedings.

2.3 Inaccurate, imperfect or fraudulent mortgage-related documentation

In a landmark study published in the Texas Law Review in 2008 entitled “[Misbehavior and Mistake in Bankruptcy Mortgage Claims](#)”, Prof. Katherine Porter examined data from 1,768 foreclosures in the US and generated the following key findings:

- Over half of mortgage companies’ proofs of claim lacked the documentation necessary to establish a valid debt (see [Figure 2](#)).
- In the aggregate, mortgage creditors asserted claims that were more than \$1 billion higher than borrowers believed they owed.

Prof. Porter surmised that the problems identified in this foreclosure study are not limited to foreclosed mortgages and represent a broader trend within the industry and exposes significant weaknesses in the current mortgage servicing industry.



Figure 2. Percentage of Proofs of Claim Missing Required Documentation



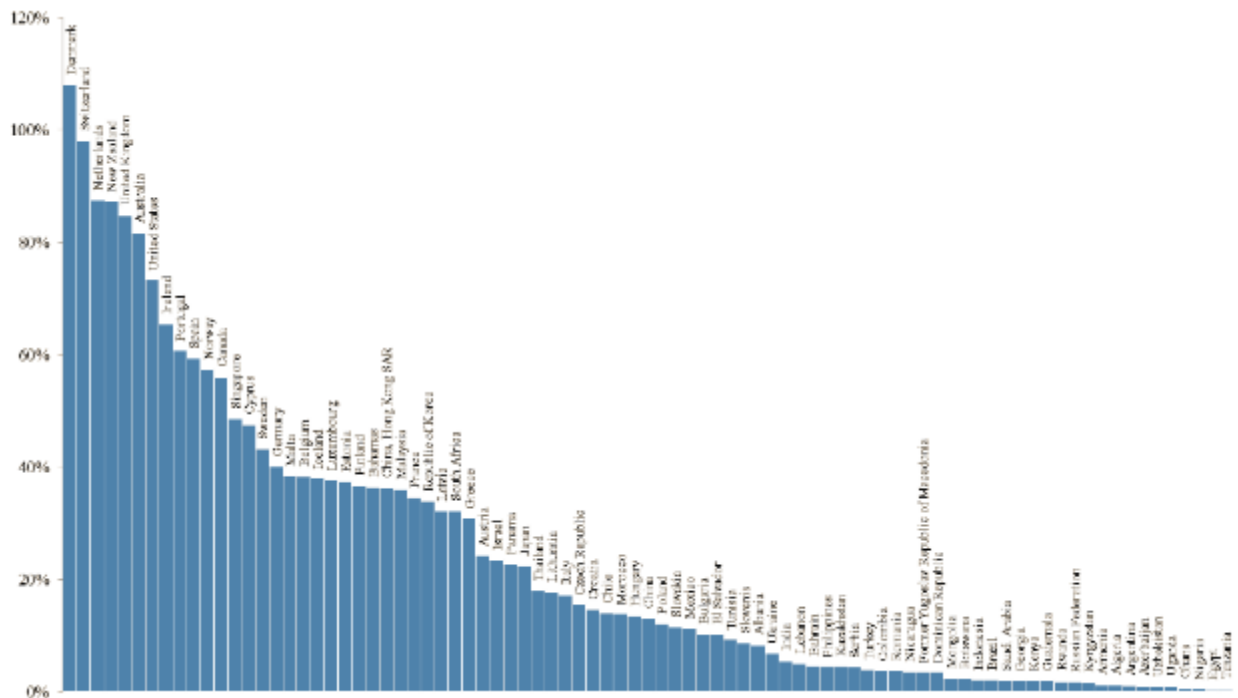
Source: “Misbehavior and Mistake in Bankruptcy Mortgage Claims”, Katherine M. Porter, *Texas Law Review*, Vol. 87:121, 2008.

The [Mortgage QC Industry Trends Report](#), published by ACES Risk Management, analyzed for critical defects among 75,000 unique loans in the US from 65 lenders. The data as of Q4 2016 implies some \$210 billion of US mortgages contain such defects which are partially attributable to a rise in legal/regulatory/compliance since implementation of new regulations in Q4 2015.

Figure 3 provides a sense of the size of the mortgage market globally based on research undertaken by The World Bank. “Mortgage Depth” is defined as the ratio of all outstanding mortgage debt divided by GDP.



Figure 3. Mortgage Depth by Country (average of 2006 – 2010)



Source: “[Housing Finance Across Countries](#)”, Policy Research working Paper 6756, The World Bank, Finance and Private Sector Development, Global Capital Markets Department, January 2014.

3. Product Description

CPROP’s mission is to drive standardization, automation and validation in transactional real estate to enhance operational efficiencies, reduce costs, improve accuracy and reduce risks for all stakeholders using blockchain technology. The CPROP platform will be accessed via web or mobile app providing a highly effective way for all users to find and interact/transact with one another. [Figure 4](#) illustrates how the ecosystem of CPROP users may interact with one another.

Essential details of each transaction should be transparently, securely, and immutably recorded using existing blockchain, smart contract, encryption, GPS, and scalable storage solutions. Where they add value, existing services like multiple listing services (MLS’s), digital financing, e-signatures, escrow services, document storage, and translation are planned to be integrated into our flexible and scalable platform to break down the barriers of language, process, currency, and location.

While CPROP is designed principally as a P2P platform, it may be leveraged by brokers, financial institutions, title, and mortgage companies should be able to create additional channels to market while enhancing transparency and reducing costs and risk.



Figure 4. CPROP Ecosystem

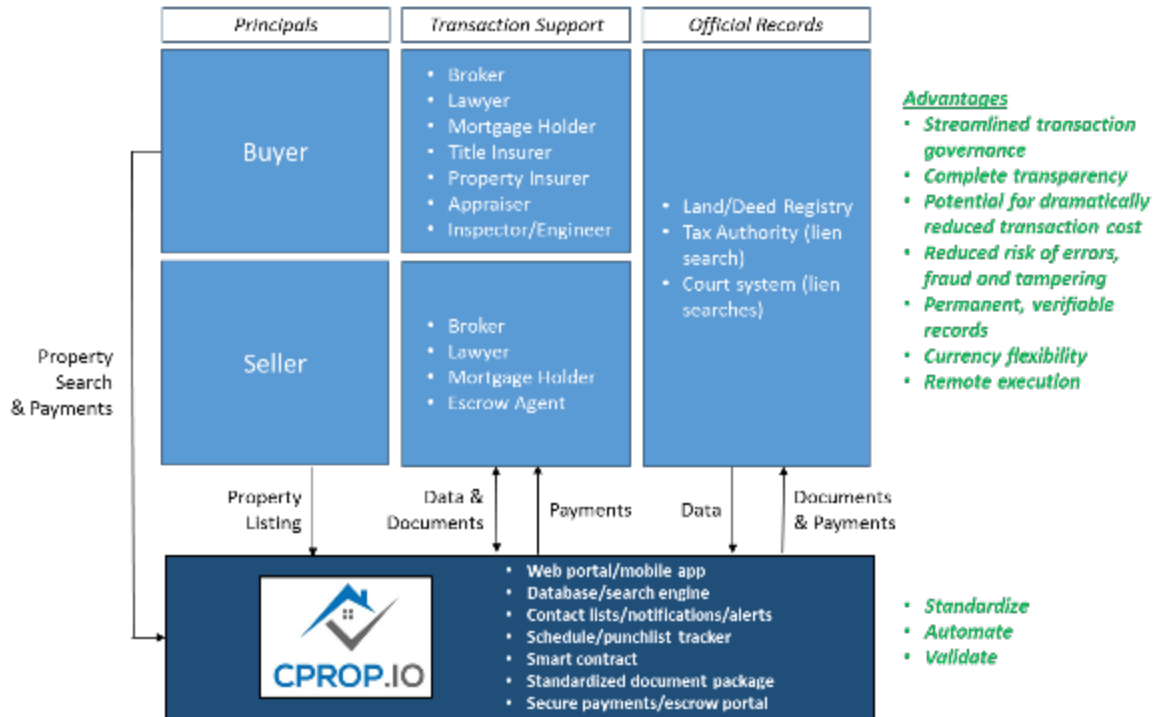


Figure 5 provides a more detailed anatomy that illustrates how the existing real estate taxonomy can evolve to take advantage of this powerful technology.

CPROP wants to encourage interaction with other blockchain applications that are synergistic with CPROP (see [Section 3](#)), including those utilizing public blockchains. When it comes to mortgage-related documentation, it can be expected lenders and borrowers are not going to be satisfied with a publicly-accessible blockchain. In these circumstances, CPROP plans to develop private blockchains, perhaps in partnership with specific lenders, to realize its commercial goals with respect to transitioning mortgage-related documentation to the blockchain.

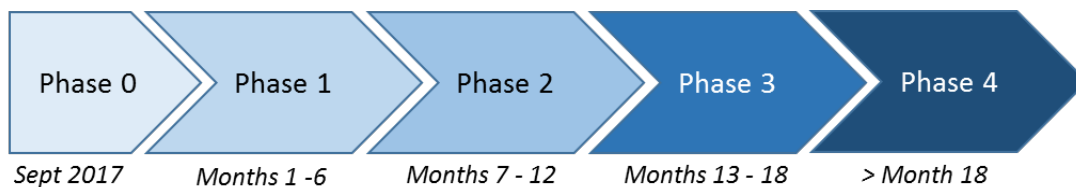


Figure 5. CPROP Anatomy



CPROP will be rolled out in phases as illustrated in [Figure 6](#).

Figure 6. CPROP Commercial Roadmap



Phase 0: Pre-Initial Coin Offering (ICO) and ICO

Phase 1: Detailed design and Beta testing

- Development of UI and standardized documentation package
- Coding
- Initial partnering arrangements, e.g., e-signature, payment processing, etc. with preference given to other blockchain service providers
- Beta test transactional platform with initial set of property listings



Phase 2: Initial rollout of transactional platform

- Launch web and mobile apps
- Expand listing database
- Debugging and platform refinement
- Expansion of operational and in-country sales channel partnerships
- Refinement of post-Phase 2 roadmap and target market

Phase 3: Commercial launch

- Intensified marketing
- Continued expansion of database and partnerships
- Build operational capabilities

Phase 4: Conversion of legacy records systems

- Work with local government to convert title records to CPROP blockchain in selected markets
- Work with selected lenders to convert mortgage documentation to CPROP blockchain

4. Features and Benefits

The commercial launch of CPROP (Phase 3) should provide numerous features and benefits to its users, including:

- **Enable buyers to transact utilizing bitcoin or other accepted cryptocurrencies.**

CPROP may partner with payment providers to facilitate conversion of cryptocurrency into fiat currency. There are several blockchain companies in this space already, e.g., OmiseGo.io. If transactions are priced in the seller's fiat currency, the payments provider can facilitate the conversion of cryptocurrency into fiat currency on the date of closing at the exchange rate prevailing on that day. This feature allows buyers, such as Chinese citizens, to overcome institutional barriers to transacting in fiat currency due to restrictions on capital flows. Additionally, this feature enhances privacy for buyers wishing to remain anonymous.

- **Enable buyers and sellers to securely transact remotely.**

CPROP may partner with an e-signature provider to allow documents generated via CPROP's smart contract to be executed digitally thus removing the requirement for buyers and sellers to be physically together for a closing, saving time and money. As an example, DigiByte has recently released DigiSign, to provide such an e-signature solution.



- **Vastly expand addressable markets for existing listings by leveraging existing MLS platforms.**

To the extent CPROP can tie into existing MLS platforms, which are typically designed for local or regional markets, CPROP should extend the reach of those MLS' to potential overseas buyers.

- **Reduce transaction costs for buyers and sellers.**

The average transaction costs for US residential real estate transactions, including commissions, title insurance and the plethora of fees can approach 10% of total contract value. Particularly when used to directly connect buyers and sellers, CPROP aims to substantially reduce these costs.

- **Automate the closing process and generate standardized documentation**

By automating document generation and execution as much as possible, and creating a standardized documentation package based on the requirements of each legal jurisdiction, CPROP seeks to minimize errors resulting in more accurate and reliable closing documents. In addition, by having the process be fully transparent, all involved parties can be informed of the status of the transaction at all times so that duplication of effort is minimized.

In the longer-term, e.g. Phases 4 and beyond, CPROP envisions several additional features, including:

- Multilanguage translations of standardized document packages to reduce geographic barriers, e.g., in partnership with Nälj.io
- Originate crypto-based mortgages, e.g., in partnership with a cryptocurrency lender

5. Native Token and Structure

All CPROP platform-related fees will be payable with a native token, the "MLS". These MLS tokens will be used to pay for the various services provided by the platform such as fees for generating standardized documentation packages based on a smart contract algorithm, escrow services, government filings, and payment processing including cryptocurrency/fiat currency conversions. Other fees, also payable in MLS tokens, could include listing fees and/or commission-like success fees, depending upon further market testing of the concept. The key takeaway here is that there are multiple potential revenue streams due to the number of services being offered to a multiplicity of potential users.

CPROP, the sponsor of this project, plans to establish an affiliate entity, i.e., a Singapore foundation, to issue the MLS tokens.

CPROP is planning a crowdsale of MLS tokens with a hard cap of \$35 million. CPROP will mint a maximum 100,000,000 tokens with a nominal value of \$0.50 each, allocated as shown below in [Table 2](#)



and [Figures 7 and 8](#). There is no specific planned allotment of tokens to power the platform which should create immediate demand for tokens once the platform is launched. This is an intentional design feature of the crowdsale intended to create demand for MLS tokens and drive value.

Table 2. Estimated MLS Token Allocation

	Comments	Tokens (quantity)
Pre-ICO contribution phase	50% discount; target = \$10M; effective token price = \$0.33	30,000,000
ICO contribution phase	\$0.50 each; target = \$25M	50,000,000
Allocated to Founders	24 month vesting	10,000,000
Reserved for future Team members		5,000,000
Reserved for bounties, consultants		5,000,000
	Total MLS tokens minted	100,000,000

Figure 7. Estimated MLS Token Allocation

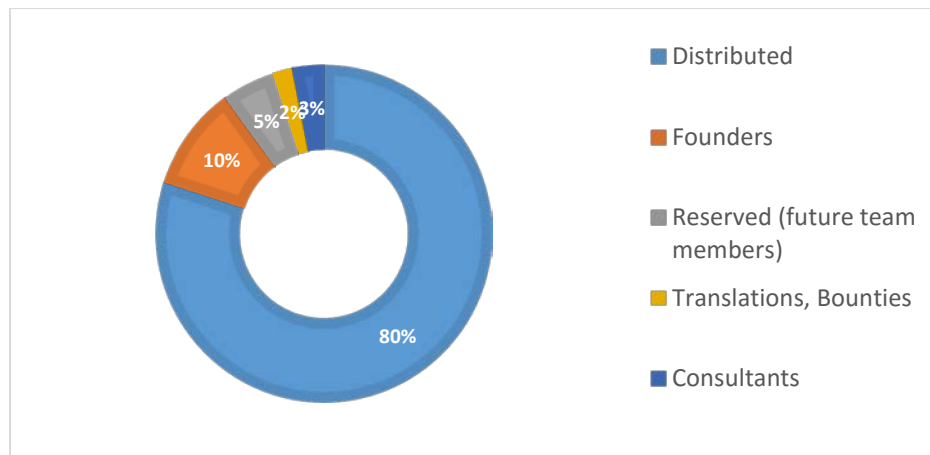
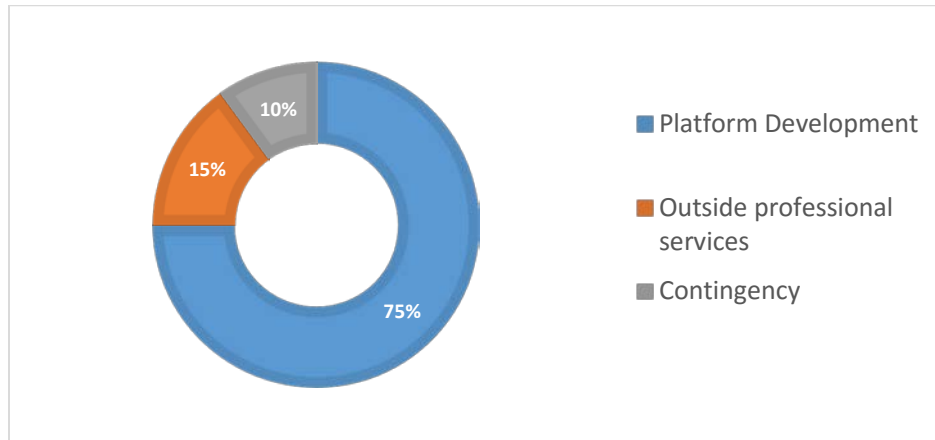




Figure 8. Estimated Application of Contributions



6. Reasons to Support CPROP

Because the founders of CPROP are also avid crypto investors, they have incorporated design features into the structure of the company that would make them want to contribute their own money to the project. Accordingly, the business plan incorporates these key elements of importance to token holders:

1. The ICO fund raise has a reasonable hard cap of \$35 million – CPROP is not trying to take in unlimited funds.
2. A maximum of 100 million tokens will be minted.
3. There is no specific allotment of tokens in the ICO to power the platform which should create immediate demand for tokens once the platform is launched. CPROP is designing for low token float.
4. CPROP plans to conduct and publish an annual audit by a globally recognized top accounting firm.
5. CPROP plans to conduct and publish an annual security audit by a globally recognized internet consultant.
6. In addition to maintaining its social media channels, CPROP anticipates sending weekly progress updates to its email subscriber list.
7. Fifty percent (50%) of net profits (audited) will be used annually to repurchase and burn tokens thus increasing scarcity.
8. A number of potential revenue streams are possible due to the number of services being offered to a multiplicity of users.
9. CPROP has assembled an impressive team with vast and relevant international experience.



10. Founders' tokens will be distributed in equal installments over 24 months, thus ensuring focus on making the project a success. Any founder that leaves the project will have their undistributed tokens burned, thus assisting scarcity.
11. CPROP is a true blockchain company because blockchain is core to the business model. Property-related records is widely recognized as one of the top use cases in which blockchain can become mainstream.
12. CPROP anticipates integrating other blockchain companies with its offering, giving preference over non-blockchain concepts in order to help grow the community. CPROP believes blockchain companies need to work in cooperation with one another to accelerate the transition of blockchain to a mainstream, commercial construct.

7. Team Members



Adam Koehler

- Co-Founded The DotLoop Company, a real estate-based startup sold to Zillow for \$100+ million.
- Founded Reversed Out Creative Services which he has grown into a multi-million dollar enterprise.
- Founded CovWorx, a shared working space for tech professionals in Covington, KY.
- Named to Great Leaders Under 40 for 2017 by Lead Magazine.
- Nominated by Legacy Group of NKY for Next Generation Leadership Award 2017.
- Co-Founded CinciCrypto, a group for cryptocurrency enthusiasts.



Sandy Selman

- Co-founded/managed Asia West Environment Fund LP, a \$100M+ early-stage venture capital program.
- First professional investor in E-Leather Ltd., served as Chairman and grew to profitability and No. 1 global market share.
- Co-founded Sanus Connect which designed and is deploying a novel data platform for a Fortune 500 real estate firm for property management.
- Extensive global experience developing and financing real assets as project finance banker.



Fabiano Távora

- Chairman of the International Law section of the Brazilian Bar Association – Ceará Chapter.
- Managing partner Távora Advogados, an international law firm serving varied clients from multinationals to technology start-ups.
- Former Brazilian CEO for Alphapraxis International, an international strategy management consulting firm.



- Co-founded and sold a Brazilian mobile app company that generated millions in revenue in its initial 12 months of operation.



Jay Fortin

- International corporate attorney with more than 20 years of experience as a law firm partner and general counsel representing investors, developers, financiers, government entities, contractors and other stakeholders in complex cross-border investments in real estate, infrastructure and other real assets.
- Successfully closed over US\$5 billion of transactions in both developed and emerging markets in the US, Europe, the Middle East, Asia and Latin America.
- Experience developing and managing compliance programs for OFAC, FCPA and AML rules and regulations and managing enquiries and investigations by governmental authorities on behalf of clients. Familiar with U.S. laws governing or affecting business internationally, including the US securities laws, Sarbanes-Oxley, Dodd-Frank and FATCA.
- Extensive experience dealing with foreign and domestic governmental officials and regulatory agencies, including negotiating concession agreements and obtaining necessary licenses, permits and approvals for large, high-profile transactions.



Saleh Bawazir

- Built and managed the Disaster Recovery Center in Jeddah, Saudi Arabia which houses the Kingdom's critical data.
- Led that team that installed the Inmarsat satellite system in King Fahad City that provides communications for commercial ships and naval vessels.
- Brought numerous new technologies into Saudi Arabia including the first aeroponic farming system to recycle precious water in partnership with Pepsi, Jeddah.
- An avid real estate investor representing and advising his extended family and members of the Royal Family in hundreds of transactions worldwide.



Eric Wang

- Led M&A for Tom Group Ltd., a US\$8 billion HK GEM-listed company.
- China GM of JV between VC-backed US company and a large Chinese SOE.
- A skilled sales & marketing professional with a demonstrated track record of navigating across the Chinese commercial and government landscape.
- Excellent profile with Chinese central government ministries, PBOC and Provincial governments.



Justin Davis

- Co-Founder of BuzzBin Media, a social media management company.
- Owner of iBolt Consulting, an IT company specializing in high-end technical solutions.
- Certified Salesforce.com Consultant, focusing on data security and data integrations.
- Serves as technical lead and advisor for Eric Clapton's digital platform, releasing media content to millions of people worldwide.



Luke Sestito

- Founded The DeLeon Group, Inc. to take emerging technologies globally.
- Advised governments of GCC including Saudi Arabia, Qatar, UAE, and Kuwait on matters involving food security, water, and infrastructure.
- Co-founded Sanus Connect which designed and is deploying a novel data platform for a Fortune 500 real estate firm for property management.



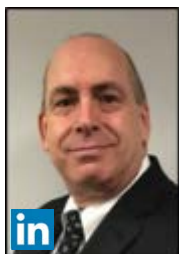
Steve Weathers

- Founded MyProto Technology, which provides technology strategy and consultation to startups.
- AWS Certified Solutions Architect with 18 years of experience as a Web Developer, Systems Analyst, and Technology Manager.
- Specializes in designing and building scalable, multi-market platforms and databases-driven solutions
- Consults with startups, agencies, and VCs on technology best practices.



James Spence

- Responsible for technology and investment product sales for SEI Corporation, a wealth management business, serving the institutional finance sector.
- Retained by MP3.com to provide strategic advice in support of their \$1.3 billion IPO.
- Co-founded EQ Ventures to mentor scores of C-Level executives across a variety of verticals on strategy and implementation of initiatives to grow revenue.
- Moved to Brazil and executed a turnaround for a large multinational.



Jon Zinman

- Licensed attorney in the States of New York and Florida.
- Represents foreign investors in commercial and residential real estate in the US.
- Represents private and commercial lenders in construction financing for small- and mid-cap developers.
- Represents developers in condominium conversion and construction projects.



- Sponsor of the Real Estate Board of New York and gives continuing education classes to real estate brokers.

**Nick Selman**

- Led multi-million dollar global strategic change initiatives across variety of industries and business functions as senior consultant for The Consulting Lab.
- Client list included eight Fortune 100 companies and six of the 50 largest global banks.
- Founder of two e-Commerce startups: Javaya and TULIP BRAND.
- Directs Product Development for Sanus Connect which designed and is deploying a novel data platform for a Fortune 500 real estate firm for property management.

**Jeremy Begley**

- Founded Cincinnati Energy Solutions, the first home performance contracting companies in the Greater Cincinnati market.
- Participated in the national initiative to incorporate green building features into the Multiple Listing Service (MLS).
- Founded a consulting firm that verifies green building standards are being attained during design and construction.
- Co-Founded CinciCrypto, a group for cryptocurrency enthusiasts.