

# Root Project

A Cryptocurrency to Change the World. Now.

## ICO Whitepaper

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## Prelude: Why

In the East Village, New York, two tech entrepreneurs just explained cryptocurrencies and ICOs to a friend. “It’s a shame you couldn’t have a coin for people in extreme poverty,” said the friend, a psychologist who has worked with homeless people since her PhD and hospital residency. “They are so much more likely to get robbed at gun or knifepoint that a cryptowallet could make their life a lot safer. There are already some very successful programs to give them good phones that require fingerprint access.”

“Wait a second!” said one of the entrepreneurs, a political economist and student of currencies, “You actually *could* design a cryptocurrency that would be useful for them and make initial investors a ton of money.”

“OK, give the currency a hard cap, so there’s a strictly limited amount of it. Then, let people crowdfund community charity-work projects – like, my neighborhood needs a garden here, or my block needs the litter picked up. When enough people donate, the project starts, and a small portion of the donation goes to purchasing the currency, which will drive the currency’s price up.”

“In fact, if you designed it correctly, it would be incredibly attractive to large companies and institutions: Deals could be structured where they get a headline saying their company just gave a million dollars to a nonprofit, but a lot of that would really be a purchase of a the cryptocurrency, which they expect to appreciate, the other half a donation to a particular project that’s tax deductible. In effect, they could make large, publicity-grabbing donations at a fraction of the cost or even a profit.”

“What would be really cool,” said the other entrepreneur, “you could pay the impoverished people completing the work, say, minimum wage in USD, held in the cryptowallet – but then, in the cryptocurrency, deposit another 50% of those wages in a kind of medium-term ‘pension fund.’ After the person meets certain work requirements over a few years, they get those funds incrementally released. That ‘pension’ fund’s continually-increasing holdings of the cryptocurrency would drive the cryptocurrency through the roof. Workers and investors would both enjoy that appreciation.”

“Wow. So people are getting out of poverty and building careers by visibly being excellent members of the community. Donors get a tax deduction and get to point to a project on the block they thought up and helped finance. Everybody gets integrated into the community.”

“We need to make this happen.”

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## Abstract

**RootProject**, a non-profit, along with its cryptocurrency, the ROOTS token, are described. Recent innovations in urban public policy, a new cryptocurrency, and a novel model of crowdfunding are brought together to provide a powerful model of crypto asset appreciation and investor-participant interest alignment. This model is generalizable across most sectors. In this instance, the interests of investors and society's most vulnerable are aligned by creating the world's first effectively tax-subsidized cryptocurrency.

Currency supply is strictly limited to a hard cap. The currency-institutional system is designed to generate rapid and long term growth in currency demand, as well as repetitive, permanent reductions in token supply. Individuals and institutions can create crowdfunded projects that burnish their reputation with minimal labor – and receive major tax deductions for doing so. Donations to projects directly increase token demand. In addition, a portion of wages is sent to a medium-term worker pension fund-like smart contract, which fuels long-term, systemic reduction in liquid token supply.

Sophisticated machine learning and real time data publication are used to endow the ROOTS token with expected price behavior desirable to large financial institutions with diversified portfolios. This innovation is also generalizable across most cryptocurrencies. If adopted widely it would significantly accelerate value creation in the crypto asset space.

## Who We Are

### Cofounders



**Chris Place** is a cofounder of [Prepd](#) and a Y Combinator alum. Prepd has enjoyed over \$5 million in sales in its first 1.5 years. He holds a BA (Hons) in industrial design, and has worked with award-winning designers on globally recognized brands. He has years of marketing experience in traditional and start-up settings and has personally conducted multiple \$1 million+ crowdfunding drives.

He is from London and divides his time between New York and Hong Kong.



**Dr. Nicholas Adams Judge** is a political economist. He received his PhD from the Department of Political Science at the University of Wisconsin-Madison in 2013. His [dissertation](#) explored inferential and numerical optimization issues in the most sophisticated models used in international currency markets.

Before he founded and built [wander+](#), he worked as a big data programmer at Revolution Analytics (acquired by Microsoft)

He is from Boston and currently lives in New York City.



### **Zac Filan** Principal Software Engineer

Zac is a Principal Software Engineer at Allscripts, where he is the Technical Lead of an Agile Scrum team. He has spent more than two decades in engineering roles, roughly half that time at IBM.

He has taught Software Systems Analysis and Design at the university level. He holds an MS and BS in Computer Science.



### **Anton Kraminkin** Development Director

Anton is an economist and an early blockchain enthusiast.

Having first invested in Bitcoin in 2012, he has participated in numerous pre-ICOs and ICOs. In those five years, he has seen the crypto asset space mature from bitcointalk group buy initiatives and the first asset exchanges, such as GLBSE, to serious international token sale efforts, backed by institutional investors and venture capital.

Anton previously worked at Oliver Wyman, a leading international management consultancy firm. He graduated from the University of Warwick (UK) with a degree in economics, and will soon start an M.A. in the social sciences at the University of Chicago.

## Advisors

The founders of RootProject are advised by several cryptocurrency and blockchain experts, as well as leading New York legal and accounting firms.

In addition, RootProject's on-the-ground operations involve a well-studied area that overlaps the fields of public policy, economics, political science, sociology, psychology and urban studies. Look for additions to this section as Drs. Judge and Hooper build out a world-class advisory board of experts in those fields.



**Dr. Ashley Hooper** is a senior economist at Keystone Strategy. She received her PhD from the Department of Economics at the University of California San Diego.

Previous to Keystone she was the acting Head of CRE and CMBS Research at Deutsche Bank, previously the largest CRE lender in the world.

She is from Maryland and lives in San Francisco.



## Introduction

It's been proposed elsewhere that cryptocurrencies will create a more egalitarian society: Decentralize authority and create economic mobility, and people at the margins of society will eventually benefit. For someone without a laptop or basic education, or living without reliable housing, though, that's just some academic argument.

It turns out that a cryptocurrency can, right now, restructure the fight against poverty. In fact, the more profitable our cryptocurrency is for investors, the better it is at reducing poverty. The right design of the currency and the non-profit institution that administers it will *strongly align the interests of investors and those stuck in extreme poverty*. The more money investors make, the more people get pulled out of poverty and the more the non-profit grows. The more the non-profit grows, the more the currency appreciates.

It is worth stepping back and considering the historic nature of *actually* aligning the interests of wealthy investors and society's most vulnerable. The power to do so comes from a combination of novel type of crowdsourcing and a cryptocurrency<sup>1</sup> – a model that we think will alter much of the economy.

This is not an idealistic vision that hopes people's good intentions will somehow vaguely feed into token demand. This is a cryptocurrency and a concomitant regime designed precisely to generate a reliably appreciating asset.

Currency supply is strictly limited to a hard cap. The currency-institutional system is designed to generate rapid and long term growth in currency demand, as well as repetitive permanent reductions in token supply. Individuals, neighborhoods and large institutions can create crowdfunded projects that burnish their reputation with minimal labor – and receive major tax deductions for doing so.<sup>2</sup> Donations to projects directly increase token demand and, via wages sent to worker pension fund-like smart contracts, fuel a long-term, systemic reduction in liquid token supply.

Just as importantly, though, it's a powerful model of change, nearly as good for the cryptocurrency community as it is for those that the nonprofit helps.

## Looming Regulatory Threat

Everyone in the cryptocurrency community knows that at some point the US government will step in, potentially with draconian regulatory action. This particular ICO is protected against that: It is a not-for-profit, non-equity crowdfunding project; no equity or control is given away, no equity-like product is sold.

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<sup>1</sup> And has as a necessary condition recent innovations in urban anti-poverty policy.

<sup>2</sup> Purchase of tokens will not, of course, be tax deductible. But most crowdfunding donations, which by design drive demand for the token, will be. See the "How It Works" and "Demand Growth and Supply Reduction" sections.

Think more broadly about the community, though: Which would you like to be the public face of cryptocurrencies when regulators start to act: A set of blogs that are impenetrable to the mainstream consumer (voter), or people on the street, wearing bright shirts with a coin logo, working to better the community and give suffering people real help?

## The Model

The RootProject model is generalizable across many market types. A formal model will be proposed by Drs. Judge and Hooper in several months. A brief conceptual presentation is made here. Most readers may skip this section, and without loss of continuity go ahead to the “How It Works” section.

Cryptocurrencies are powerful tools to align the goals of interest groups. Because they can be arbitrarily designed, it is theoretically possible to construct an economic asset that restructures the political coalitional dynamics of political economic conflict on a given scale – urban, state or national. Because a successful ICO can generate capital sufficient for the construction of sophisticated institutions, that theoretical possibility is practically achievable.

Cryptocurrencies are powerful because it is *not* difficult to construct an explosive growth cycle – that is, a feedback loop wherein the coefficient exceeds 1 on a measure of the lagged state variable. The particular feedback loop that is pictured here: Growth in institutional size increases demand for a currency; that increased currency value allows the institution to increase in size, and so on.

As long as (1) an institution is capable of funneling demand for an underlying service into demand for a currency, and (2) the institution can increase its returns to scale as it grows, an explosive growth cycle should occur.

This suggests an easy-to-model approach that emphasizes the replacement of a traditional fee for a purchase of a currency. For instance, a traditional crowdfunding fee structure is 7% of all funds raised. By replacing that fee with a purchase of a currency, investors can expect demand for a currency to grow as the institution grows and generates more fees, under reasonable conditions.

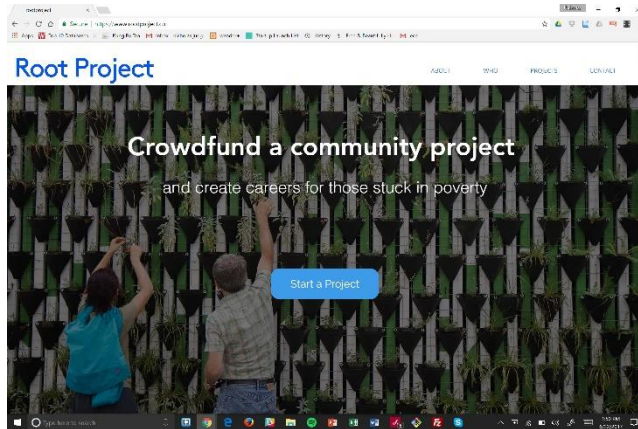
Beyond a simple currency-as-fee model, more sophisticated institutional mechanisms can do more to increase currency demand or reduce liquid currency supply. For instance, in this whitepaper we propose a worker pension fund-like holder of cryptocurrency. This medium-term pension fund-like smart contract greatly reduces liquid supply while making the crowdfunding platform more attractive as a recipient of donations.

In short, by process mapping cryptocurrency-institutional feedback loops such that explosive growth cycles are generated, it should be possible to build a new generation of institutions that profoundly affect national political economies.

## How It Works

### Crowdfunding Platform

RootProject is a dual-facing app. The first face is a crowdfunding platform for local projects. A user will download the app or go to the website to start a new project. Mobile-first design allows her to propose a new project – say, a wall garden on her street-facing building – while she’s walking home. A budget, location, before and after images and a short description will be entered.



The user then either donates the project amount or makes some initial donation. If she doesn’t cover the budget herself, she then begins a traditional crowdfunding campaign.

Donations are received and within thirty days the minimum threshold is reached or the funds are returned. Once the threshold is reached, the project is again reviewed and confirmed. If necessary, the project founder is notified that any permits or other legal permissions are needed from the state or appropriate parties.

The total budget for the project is 87% of total donations. 3% is reserved for credit card and handling fees, 10% goes to direct purchase of ROOTS tokens on the open market, increasing token demand. 87% is a higher project spend rate than most charitable organizations are capable of delivering, and in line with major international organizations.

When everything is confirmed and ready to go, RootProject assigns a project foreman – a paid employee or contractor – and a budget for materials, tools and labor, aiming to hire a team that can finish the project in one day, if reasonable. A work start date and meeting point is assigned.

### Worker Platform

#### Background

Albuquerque, NM introduced a now-nationally-watched program that is simple and powerful. A non-profit employee drives a van around each morning, offering a day’s work to panhandlers. By any metric, it has been a spectacular success. In conjunction with another city program, Albuquerque has reduced unsheltered homeless by 80% and chronic homelessness by 40%; “by HUD’s definition, [Albuquerque has] functionally ended veteran homelessness.”<sup>3</sup>

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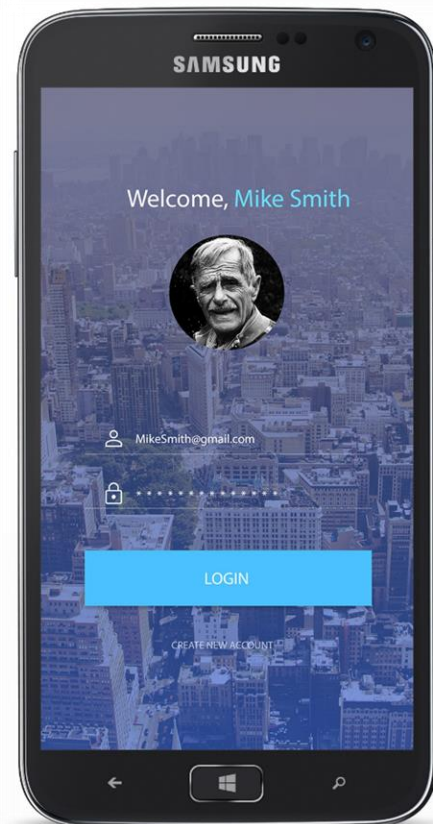
<sup>3</sup> <https://www.cabq.gov/mayor/priorities-initiatives/initiatives/theres-a-better-way>

In other cities, there are already programs to give smart phones to those in extreme poverty. For our program, the initial outreach in a new city – when donations and producer discounts are sufficient – will be to hand out phones with fingerprint sensors, a cryptowallet, and our app already downloaded on it, along with a protective case and charger.

## The Platform

Participants will choose from projects that are listed, scheduling projects in their calendar, or reserving a spot for that day. Other workers will be recruited via a program similar to the Albuquerque, NM program. We will work with city, state and nonprofit officials where appropriate in order to reduce the cost of worker recruitment.

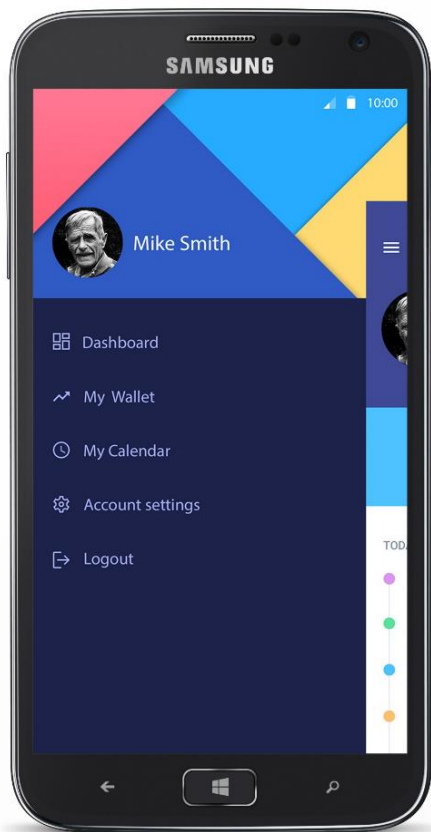
Throughout the day, contact with the workers will be used as an opportunity to gently offer basic services and goods.



One good class of candidates for project foremen are social workers trained in engaging with at-risk and highly underprivileged populations. To provide examples of goods and services that will be offered: Tee-shirts and sunscreen, or winter clothes; advice on shelter options and medical care facilities.

Upon the day's work being completed, "after" photos are taken. If the project is completed, the project initiator is invited to sign off along with the foreman that work has been completed.

Within an hour, payment will be disbursed to the worker's phone. Roughly two thirds of compensation will be in days wages, either at minimum wage or slightly above, whatever is appropriate for the market. On top of wages in USD, 50% of USD earned will be placed, in token form, in the user's medium-term "pension fund." These funds will only be released upon the worker meeting certain milestones, and then not in a lump sum but incrementally, generally beginning after six to eight quarters.



The medium-term “pension fund” will encourage saving and align the interest of workers and investors, as they both will enjoy the benefit of token appreciation.

Workers will store up funds to help with paying for housing and getting back on their feet, investors will enjoy the reduced liquid token supply.

Incrementing the release of funds, as opposed to the release of a lump sum, is generally recommended by development and anti-poverty experts.

For more details, see the “Demand Growth and Supply Reduction” section on the next page.

## Early, Recurring and Negotiated Large Projects

Scaling social programs is costly and time-consuming. RootProject will work with established non-profits and social organizations to scale quickly as it builds out its own on-the-ground staff. The alpha version of the crowdfunding platform – most vital for reducing liquid currency supply – will be publicly available within 45 days of the end of the ICO.

Early scaling efforts will involve a dedicated team and focus on generating national and international campaigns that will reduce early token supply. These staff-initiated, large projects negotiated with established institutions will involve a negotiated additional fee that will be dedicated to the purchase and burn of RootProject’s cryptocurrency. As RootProject builds its staff, these early projects will be designed to maximize and build donor networks and project institutional footprint at minimal labor cost.

As an asset expected to appreciate via tax-deductible contributions that go towards highly visible projects, RootProject’s currency is a unique opportunity for large investors, donors and organizations that leverage pre-existing donor networks. These networks often tout email lists with several million active subscribers.

In the long-term, while the main use of the crowdfunding platform will be for community-specific projects, some larger-scale crowdfunding campaigns will be, after a careful curation and negotiation process, allowed on the crowdfunding platform. One example is the rolling crowdfunding campaign that will raise funds for the smartphones that RootProject will give to participants in the worker program.

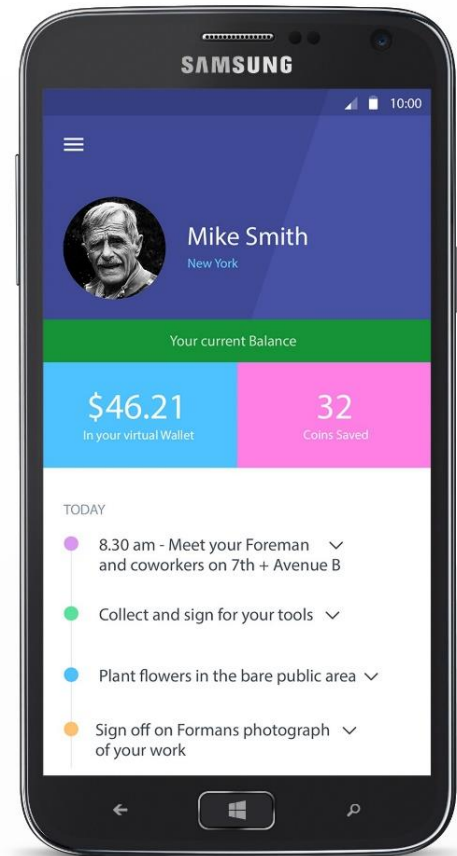
Emphasis will also be given to recurring-revenue projects, a portion of which will go to cryptocurrency purchases. An example here is an ice skating rink, with equipment rentals, on basketball courts that are not used during the winter – generating recurring revenue for RootProject and recurring wages for participants.

## Cryptocurrency Community Projects

The international cryptocurrency community is generous, active and giving. At least one full time staffer will be dedicated to negotiating with tax authorities and designing and promoting unique projects with their own currency purchase-project donation structures. RootProject will not charge any fees on these projects.

The aim will be to create a unique hybrid of maximized tax benefits and investment opportunities via projects that speak to the larger cryptocurrency community. Examples include blockchain coding courses; political lobbying around cryptocurrency regulatory issues; academic grants to develop social scientific theory of smart contract-powered institution building; and – with no fees or currency purchases – disaster relief when areas are struck by tragedy.

Finally, it is hoped that by connecting the cryptocurrency community with a standing institution capable of delivering on-the-ground nonprofit work, RootProject can fundamentally enhance the quality of giving in the cryptocurrency community.





## Demand Growth and Supply Reduction

RootProject's new cryptocurrency, ROOTS, is built for [cointegration](#) around easy-to-discern supply and demand data which will be made public in real time.<sup>4</sup> Because currency demand will be partially a function of crowdfunding campaigns that can be assessed in real time, and because supply is strictly limited to a hard cap, this predictability should, theoretically, produce price behavior desirable for investors generally, especially those with larger portfolios.<sup>5</sup>

ROOTS is a currency designed to enjoy demand growth and liquid supply reduction via at least three distinct, core innovations.

### 1. The Crowdfunding Platform

The first is a novel crowdfunding platform. A significant portion of each funded project's donations go to the removal of coins from the market, through three main channels: (1) 10% of funds raised, upon the funding threshold being reached, goes directly to token purchases, instead of traditional crowdfunding fees; (2) via the portion of labor costs that goes to the "pension fund;" (3) large donor projects that, in addition to (1) and (2) have an extra fee that goes to purchasing coins on the open market and burning that supply.

Thus donations to the crowdfunding platform, in their first-order effects, reduce token supply linearly.<sup>6</sup> This effect should be particularly powerful in the first two years, when the 'pension' fund releases negligible payments.<sup>7</sup>

Several important innovations over existing crowdfunding models will generate rapid, regular demand growth. They are each related to, and allowed by, RootProject's "Laborless Crowdfunding" (LC) model, a profound innovation in crowdfunding design.

### Laborless Crowdfunding

RootProject is a crowdfunding platform where project initiators are *not* required to do much work after a project is funded. On Kickstarter, a successful campaign may lead to years of painstaking work after completion. With RootProject, on the other hand, other people's day-labor, baked into the budget of the project, is a major *point* of the project. From an economists' perspective it is hard to overstate the LC model's importance.

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<sup>4</sup> In particular,  $X_{T \times K}$  may in reality be home to a  $K$  large enough to produce biased estimates of cointegration due to overfitting. However each  $X_t$  can, by explicit design, be constructed with just  $K = 2$  as  $E_{t-1}(X_t)$ , where one column is a measure of expected currency supply, the other expected currency demand. This exceptionally easy modeling process should, through automated trading strategies, enhance the power of the equilibrium, theoretically reducing correlations with other cryptocurrencies and asset classes.

<sup>5</sup> All statements concerning currency design are merely theoretical and subject to being swamped by speculative behavior or other variables. They represent *only* the design intentions of Dr. Judge, not claims to actual performance.

Investing in cryptocurrencies is risky and should only be engaged in with funds that one is willing to lose.

<sup>6</sup> Via the organizational growth channel, donation growth reduces coin supply exponentially.

<sup>7</sup> To be clear, this effect will persist, though, as 'pension' payments are structured to nearly always be outstripped by incoming deposits, thus perpetually reducing liquid token supply.

## Ease of Use

As a corollary to the labor-free crowdfunding model, a mobile-first, easy-to-use approach is meant to encourage spontaneous fundraising drives: Something is seen in the neighborhood that needs improving, and a crowdfunding campaign is set up in three to five minutes on someone's phone. Geolocation tags will allow each person in a neighborhood to learn of a new project. If a person opts in to push notifications, they can learn about a project currently being crowdfunded as they walk by its location.

## Burnishing Reputations

Organizing crowdfunding campaigns is often the most socially visible act a person engages in. Whether projects are initiated by local (international) elites or by regular people, the project's social value to local elites, organizations, businesses and individuals creates a powerful web of motivated actors that create effective campaigns.

The conjunction of LC, ease-of-use and reputation burnishment is designed to create motivation for a very low-cost (to the project initiator and donors) version of local activist-entrepreneurism. Creative solutions for whatever is wrong in a neighborhood, fixed by giving jobs to the most vulnerable – who would *not* want to be associated with that?

## Creating Professional Community-Improvers: Rewarding Project Initiators

A small portion of RootProject's currency, 3-5%, will be reserved to reward the top tier of project initiators. In order to keep the curated crowdfunding site free of clutter projects, rewards will be given out to particular project initiators along very strict guidelines. For example, a very high portion, 90%, of projects started by a project initiator must reach their funding threshold; initial budget estimates must not be regularly subject to major revision by RootProject staff; a high portion of projects must achieve tax deductible status; and so on.

Liquid supply released to the market via rewards to the upper echelon of project initiators will always be greatly outstripped by the liquid supply removal created by the projects they initiate.

## Tax-Deductibility

RootProject will register as a non-profit and adhere to industry best-practices. Most – though not all – projects will be tax deductible from the donor's perspective. In particular, 90% of funds raised go directly to the crowdfunded program. This portion, less the cost of the 'pension fund' contribution baked into the project budget, will be tax deductible.

As unlikely as it sounds, this crowdfunding-token purchase linkage may well mean that RootProject's currency *will effectively be the world's first tax-subsidized cryptocurrency*.<sup>8</sup> Structurally, this is only possible because of RootProject's LC model: Since RootProject is implementing the project, the project will fall under RootProject's tax status, not that of the project initiator's.

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<sup>8</sup> To be clear, the currency is not directly tax subsidized, merely one important source of demand for it. Projects will have to adhere to particular guidelines to allow their donations to be tax-deductible. We will work with tax authorities to make these guidelines as clear and simple as possible.



## Private Projects

Reputation-enhancing LC campaigns make it easy to organize a campaign. Tax-deductibility make it easy to contribute to campaigns. Still, private businesses play a vital role in the public space of cities and towns. While some campaigns spearheaded by local businesses will not enjoy tax deductibility, the profit motive of small businesses should be harnessed.

By encouraging customers to crowdfund improvements to legally private but publicly accessible space, RootProject's currency will enjoy a steady source of demand: Business owners enjoy capital improvements without labor or capital costs, customers enjoy the improved space, and workers enjoy the wages.

## 2. "Pension" Fund

The next major innovation to drive the removal of liquid token supply is the RootProject "pension" fund. An empirical fact of development literature and studies of extreme poverty is the reducing marginal utility of higher wages, relative to additional, structured incentives like health and savings plans.

By creating an institution that takes a large portion of compensation from every project and locks it away in a medium term "pension fund" whose sole holding is ROOTS tokens, RootProject both maximizes its social good and generates a high, steady rate of liquid token supply reduction. This is particularly true for the first 18-24 months, when "pension" fund disbursements are minimal to nonexistent. Even after this point, the pension disbursement rates are designed to generally be, at the aggregate level, dramatically outstripped by the pension deposit rate.

## Large Fund Purchases

Once a suitable market track record has been established, very large investment funds may find the risk and return profile of the ROOTS currency, combined with its charitable public relations advantages, to be an uniquely attractive investment. We will leverage our inherent PR advantage to encourage large-scale buy-and-hold and buy-and-burn strategies among institutional investors. In addition, we will negotiate, as part of larger deals with institutions, the deposit of tokens in a fund that locks currency away for 5-15 years via a smart contract.

## 3. Interest Group Alignment

Like most political economists and economists who have carefully considered cryptocurrencies, what particularly fascinates Drs. Hooper and Judge about cryptocurrencies is the ability to create new systems that organically align the interests of groups that previously shared divergent policy or market outcome preferences.

## Currency Appreciation and Direct Social Good

Via the "pension fund" and other channels, currency appreciation is a *direct* social good. The economic wellbeing of "pension" holders – society's most vulnerable – is directly harmed by any reduction in currency value. This – from a moral, public relations and strategic perspective – puts a break on any action to water down currency value that is,

- (a) more powerful than any whitepaper policy promise could be;
- (b) an incentive structure that strengthens over time. The larger the “pension fund” gets, the greater the cost and impact of any action that risks reducing currency value.

#### Investor-Extreme Poverty Alignment

Typically the wealthiest and the poorest are not viewed as sharing much in common. The knock-on effects of these two groups sharing strong interest alignment will be fascinating to see unfold. In particular, the interests of political figures that would like to help the poor and investors that would like to see asset appreciation would be strongly aligned. The urban political coalitions this alignment would create could generate policy outcomes advantageous to both groups and RootProject.

## Token Issuance

Ten Billion ROOTs ERC20 tokens will be created on the Ethereum blockchain during the ICO campaign. No more ROOTs shall ever be created.

To fund initial operations, RootProject will begin its ICO on August 7, selling 20% of the total supply to crowd sale participants. It will last for a period of 30 days or until two billion ROOTs are sold, whichever period of time is shorter. Each ROOTs will be sold for .0001 ether, approximately \$.025<sup>9</sup> USD, meaning the effective hard cap for the crowd sale is approximately \$45,000,000 - \$50,000,000 USD.

Tokens will become transferable within 3 weeks after the ICO completion.

### Pre-ICO

In order to fund initial hires, legal incorporation in Switzerland and other necessary expenditures, RootProject will conduct a limited pre-ICO on July 10, 2017. A hard cap of \$300,000 USD will be enforced.

Investors in the pre-ICO will enjoy a 50% bonus over the ICO rate. For example, a purchase of a million ROOTs during the pre-ICO will give the investor 1.5 million ROOTs.

### Early Backer Bonus

Those participating in the first five business days of the ICO itself will enjoy a 10% bonus. For example, a purchase of a million ROOTs will give the investor 1.1 million roots.

### Post ICO Supply Schedule

40% of ROOTs will in total be released, beginning six quarters after the completion of the ICO, at a rate of 3.33% per quarter. Thus, the beginning of Q7-Q18 will see a small amount released each quarter. Q1 is defined as beginning the day after the last day of the ICO.

This rate has been chosen so the release schedule will, based on reasonable organizational growth, be outstripped by non-investor purchases of ROOTs.<sup>10</sup> That is, releases of liquidity into the market will be less than demand growth. Should these projections appear to be inaccurate in a given quarter, the release schedule will be slowed to protect investors and “pensioners.”

Conditional on decisions by tax authorities concerning the status of the non-profit, 10% of ROOTs will be reserved for employees, to align investor and employee interest. This portion will be vested to employees over a 12 quarter period beginning in the second year of the organization.

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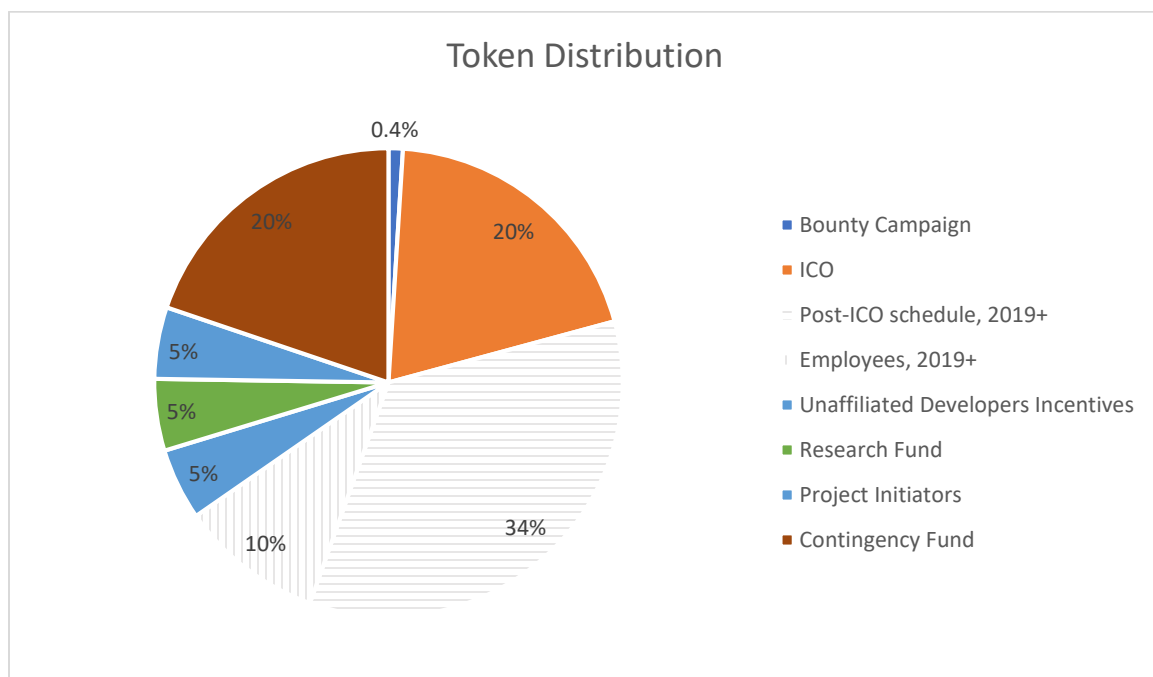
<sup>9</sup> Exchange rate as of July 2, 2017

<sup>10</sup> That is, purchases of ROOTs from the 10% crowdfunding fee, the “pension fund” and negotiated large-scale charity projects.

However, it may not be possible to be confirmed as a non-profit with such an employee compensation structure – it is a relatively novel regulatory question. In this case, the 10% will be added to the contingency fund.

5% will be held in a fund to compensate project initiators as explained above. 5% will be used for unaffiliated developer's incentives. 5% will go towards an establishment of a research fund. 2% of the ICO total is reserved to compensate those taking part in the bounty campaign.

The remaining 20% will be held in a contingency fund to cover special projects, mainly to partially match large donors projects. As with the release of real time crowdfunding data, an emphasis will be put on investor communication and transparency, so investors will operate with as full an information set as possible.



## Use of Funds

Pre-ICO funds will be used to enlarge the development team, form charters in Switzerland and the United States, finalize choices for pilot cities, begin crowdfunding outreach to appropriate networks of large donors and create promotional material for the ICO itself.

Following the ICO, a larger development team will be hired, along with a CTO and a COO whose initial focus will be on building out the on-the-ground operations in pilot cities. Core technical teams will be formed around a central office in New York or Boston, and more cost-efficient teams will be created in leading centers of technical talent in Europe. A decision on the location of the central office will be based on local policy maker buy-in.

On-the-ground nonprofit staff will be placed in 3-5 pilot cities, depending on final ICO funds and local nonprofit and policy maker buy-in. Initial staff expenditure will involve teams of four and quickly expand as local crowdfunded projects create wage supply. Initial city teams will involve a senior organizer from local policy or nonprofit circles, a general administrator, a head project manager, and a community, donor and volunteer outreach coordinator.

Academic grants will be administered as a cost-efficient way to bring relevant experts into a more active program-design and lead role. Similarly, small community grants will be used to build networks of corollary organizations and leverage their preexisting expertise, manpower and social capital in the community.

JUNE 2017	JULY 2017	AUG 2017	SEPT 2017
<ul style="list-style-type: none"><li>• Whitepaper publication</li><li>• First hires</li></ul>	<ul style="list-style-type: none"><li>• Pre-ICO</li><li>• legal incorporation in Switzerland and USA</li><li>• Start of crowdfunding outreach</li></ul>	<ul style="list-style-type: none"><li>• MVP release</li><li>• ICO on August 10</li><li>• Token distribution</li><li>• Team enlargement including hiring CTO and CCO</li></ul>	<ul style="list-style-type: none"><li>• Alpha web platform release</li><li>• First 3-5 pilot projects in US</li></ul>
OCT 2017	NOV 2017	DEC 2017	ONW 2018
<ul style="list-style-type: none"><li>• Beta release</li><li>• Curated user-submitted projects</li></ul>	<ul style="list-style-type: none"><li>• Continued beta</li><li>• Preparation for national launch</li></ul>	<ul style="list-style-type: none"><li>• Official launch in USA on Christmas day</li><li>• National promotional campaign</li></ul>	<ul style="list-style-type: none"><li>• International expansion</li></ul>

## Organizations

RootProject is a powerful tool to leverage work that is needed or wanted in the community to help those that need wages, to build a work history, get back on their feet, and begin saving. The creativity of crowdsourced projects will likely lead to projects that we cannot at this time foresee.

Interacting for full workdays with at-risk or impoverished individuals creates incredible opportunities to help them and the broader community.

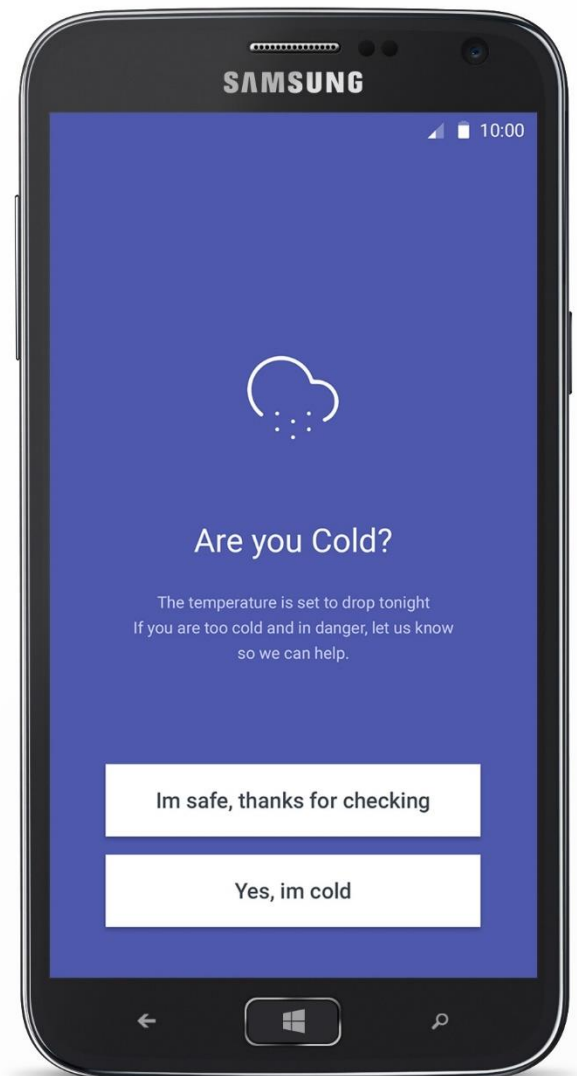
We will, through our own programs and working with local stakeholders,

- facilitate resume-building and transitions to full-time employment;
- mobilize volunteer networks during high risk periods;
- expand social networks and integrate mental health experts into daily work programs;
- facilitate workers graduating to foreman status;
- create tutorship programs;
- open source (anonymized) data to aid academic study and government program-building;
- encourage project initiators and donors to engage with at-risk communities;
- recruit large organizations and community leaders to mobilize their donor networks for reputation-burnishing, recurring projects.

## Pilot Program and Scaling

We aim to quickly be an international organization, but pilot programs in 1-3 cities must first be completed, as a national board of academic and policy experts crafts policy, economic models are trained on new data, and first-hand user feedback leads to new insights. Boston, New York and other cities in the tristate area are being considered.

As we expand to new cities, high-visibility projects will be designed to generate press coverage. For instance, if New York is selected as a pilot city we may engage in solving “famous” problems. A “Zero Litter Greenwich Village” project is perhaps a good example. As high-visibility projects are finished, we will work with stakeholders to make neighborhood improvements permanent. To continue with the litter example, we would work with police to renew enforcement of anti-litter laws after program completion, in order to create a policy shock and develop new policy outcome equilibria.



To be clear, projects will scale quickly, as organic crowdsourcing of new projects becomes a low-effort, high-visibility reputation boon to project initiators. However, using team resources to lead creative, visible projects will help bring awareness quickly to vulnerable populations, policy makers and the general public.

## A Word of Caution

Mixing market forces with society's most disempowered is a fraught exercise. Often, vulnerable people separate themselves from society precisely because they *are* too vulnerable to interact with it safely. Forces from the tech world, in particular, have sometimes ended up doing indirect but serious harm while trying to do good through charitable or political organizations.

Classic examples include closing down failing schools and opening better schools blocks away, forcing students to cross preexisting gang lines. Or fwd.us' grossly incompetent 'bipartisan' lobbying campaign.

While their intentions were good, the source of failure was a lack of domain-specific knowledge and the inability to recognize that lack – even as it was painfully obvious to actual policy experts in academia. Many such experts had to watch as their recommendations were swept aside by new, tech-connected interest groups.

Among our team, Drs. Judge and Hooper are well-positioned to proceed with caution – to reach out to, and foster, communities of expertise. We are excited and emboldened by the plan you just read. We will execute it with great energy but also with the rigor, prudence and humility necessary to build first-rate institutions.



## Appendix: The ROOTS token and Smart Contract integration

### The ROOTS token

RootProject will issue its own token called ROOTS on the Ethereum blockchain following the ERC20 standard. A portion of tokens paid to workers will be locked in a “pension fund”, but liquid tokens will be fully transferrable between ROOTS owners to any Ethereum address.

Compared to using an existing crypto asset, the custom built ROOTS token provides several advantages. Namely it,

- Allows the alignment of investor and worker interests;
- Allows the use of ROOTS tokens in smart contracts for secure, verifiable and irreversible transactions;
- Protects investors and workers from exchange rate volatility experienced by other crypto assets, which may arise because of factors not related to the RootProject development;
- Provides the ability for RootProject to verifiably issue or burn tokens;
- Allows the ROOTS token to migrate to a new blockchain, for example Bitcoin Rootstock, in the event that Ethereum does not fully satisfy the RootProject’s needs and requirements;
- Makes it possible to develop smart contracts that would lock in ROOTS tokens for a specified amount of time. In particular, for the medium-term ‘pension fund’ and for negotiated very long buy-and-hold contracts related to negotiated projects with large institutions.

## "Pension fund" smart contract mechanism:

### Smart contract mechanism

- 1) Project Starter (and individual or an organization) starts a social campaign initiative on the RootProject Website or App
- 2) Contributors raise money towards the project by donating either fiat or a cryptocurrency
- 3) Proportion of the raised funds get automatically exchanged into ROOTs
- 4) ROOTs are deposited into a "Project Contract" smart contract, which will go towards the "Pension Fund". Those funds will be sent to the worker's "Pension Fund" only if "Validators" sign the contract. Both the Project Manager's and Project Starter's signature are required to confirm the project's completion. Should one of them fail to sign the contract or report that the project does not meet the requirements, a RootProject Independent Checker gets sent to assess the project's status. The Independent Checker has the "master signature" and can overrun the Project's Manager's and Starter's decision.
- 5) ROOTs are sent either to the worker's "Pension Fund" smart contract, or back to contributors should the project fail to be completed
- 6) "Personal Progress Validators" act as oracles to check off the worker's requirements for "pension fund" release to the worker. Those requirements would include things such as "attended X substance abuse seminars" or "worked for 10 hours weekly for 4 weeks"
- 7) Once the "Personal Progress Validators" sign the contract, the Smart Contract 2 starts to release ROOTs to the worker's personal crypto wallet via the specified schedule. Should the worker fail to reach certain personal milestones, the "Pension Fund" contract sends money back to contributors
- 8) Worker gets full control of ROOTs, which he or she can exchange for fiat / other crypto / use for payments

