

# SyraCoin | Syracuse Token Economy White Paper

Blockchain Public Financing to Solve Social and Infrastructure Challenges

Scalable to All Cities for All Causes



## SyraCoin

“Syracuse Helping Syracuse”



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# Abstract

Syracuse Token Economy is a historic first, inspired by a vision to create self-directed and self-sufficient economies for all municipal governments. When economic control is brought to the local level, cities move with agility to solve specific social issues that matter to their own residents. City governments need control of their own economies in order to:

- 1) stimulate local small businesses and economic centers
- 2) fund locally meaningful programs that directly serve residents
- 3) ensure sustainability of local economies and social programs regardless of changes in nonprofit grant funding, political agendas and administrations, as well as federal and state budgets

Syracuse Tokens, known as SyraCoins, are utility tokens. In blockchain terminology, this means they are not securities. Therefore, these tokens hold value in the form of:

- 1) local small business perks (e.g. discounts and promotions at local food, drink and entertainment venues)
- 2) in-kind large enterprise perks (e.g. ride sharing credits, movie theaters, major sporting leagues)
- 3) public sector perks (e.g. nullification of parking tickets and discounted taxes).

The beauty of city tokens is that they perpetually increase in utility value as adoption increases among local businesses, large enterprise partners and local public sector agencies. Due to this snowball effect, people are incentivized to buy into the token economy and to hold their city tokens as universal loyalty points that last forever.

The motto of Syracuse Token Economy is “Syracuse Helping Syracuse” because this ecosystem encourages people to donate charitable funds locally, redeem utility tokens for local value and to keep funds flowing within city limits instead of leaking into unnecessary third parties, transaction fees and administrative costs. SyraCoins enable peer-to-peer transactions so that the helping hand can be extended between neighbor to neighbor.

# Letter from City of Syracuse Office of Accountability, Performance and Innovation

Since 2015, the City of Syracuse has made innovation a priority. We have utilized engagement, design, analysis, and technology to address dozens of challenges. We have worked to build capacity and embed innovation across the organization and community. Now, we are excited to announce that as part of the Startup in Residence program we are adding another tool to our innovation toolkit, working with startup tech companies.

We are fully embracing the Fourth Industrial Revolution. Not only are we positioned to become the first fully integrated smart city in the United States, but we are also pioneering the use of other technologies in government, including blockchain, to address city challenges.

During his first year in office, Mayor Ben Walsh made it a priority to improve housing stability and reduce resident transiency. Within the City of Syracuse, 25% of households move at least once every year. Many of these are forced moves and leave lasting impacts on residents. This is a huge challenge for which there is no magic bullet. However, we realize that if we are truly going to address it, we need to embrace a new type of technology.

We are excited to partner with a new startup company, Vite Labs, to develop, build, and deploy the first ever blockchain- based economy to address housing stability.

Sincerely,

Adria Finch  
Director of Innovation  
City of Syracuse Office of Accountability, Performance, & Innovation

# Letter from Vite Labs

At Vite Labs, we believe in bridging innovation and mass adoption by discovering and proving socially meaningful use cases.

Our participation in Startup-In-Residence and the Syracuse Token Economy project is our investment of capital, technical expertise and operating capacity into this mission. Blockchain is uniquely fit for public financing and the concept of city tokens is scalable to all municipal economies.

Our approach to mass adoption has been marked by a commitment to forming non-cosmetic partnerships. As opposed to other firms in blockchain and digital currency, we have actively ignored the speculative nature of this emerging industry. Instead, we are creating tangible value for society by working with the public sector. Our hope is that Syracuse Token Economy becomes a success which can be replicated by any other city, so that this white paper acts as a playbook for any city token.

This project is about bridging blockchain and government, technology and society, theory and practice. Our journey with the City of Syracuse is only beginning; we commit to seeing this project through and to sharing the knowledge with others who are doing good work.

We believe in non-disruptive innovation that respects public well being, legacy industries and human relationships. It is an honor for us to serve society through our work with the City of Syracuse.

Sincerely,

Luke Kim  
Chief Marketing Officer  
Vite Labs

# Social Cause: Housing Instability + Syracuse

## Local Context

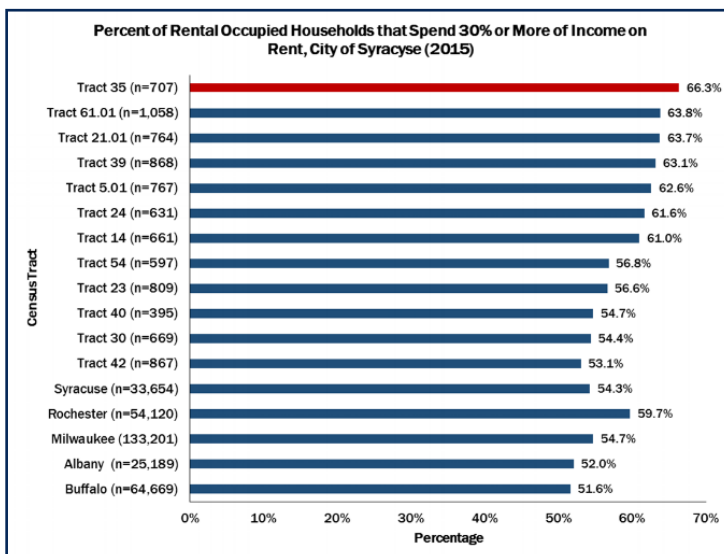
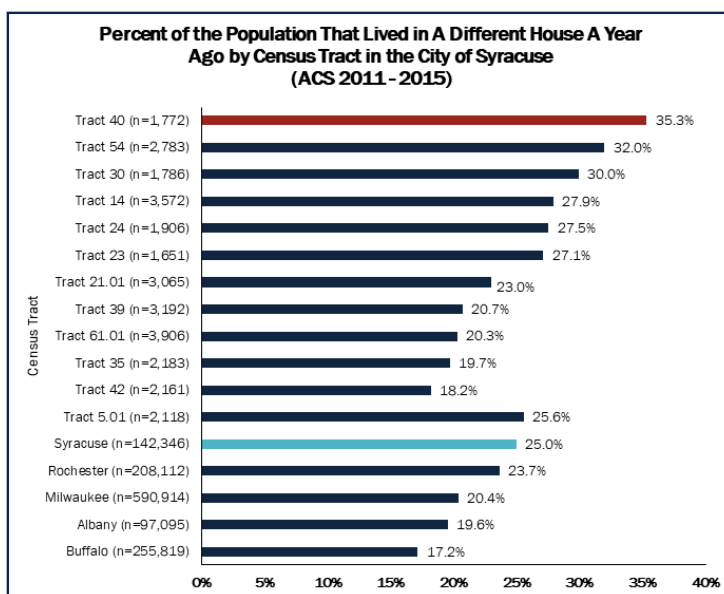
Many Syracuse residents experience a high frequency of forced moves, triggered by poor housing quality, unstable neighborhood conditions, and high costs of housing in relation to income. All of these conditions can contribute to doubling up and overcrowding in housing units, chronic homelessness, and a high rate of unplanned residential mobility. Frequent forced moves have damaging financial and health impacts on the City's residents and neighborhoods, especially on school-aged children.

According to an analysis done by the Community Benchmarks program at the Maxwell School of Citizenship and Public Affairs, 25% of Syracuse residents move at least once a year. In some census tracts that number is more than 35%. That's higher than all three of Syracuse's Upstate New York peer cities, Rochester, Albany, and Buffalo, and more than twice the national average of 11.2%. For children under the age of 17, 21% move at least once a year, with that number more than doubling to 43% in some census tracts. When that data is filtered to include just the City's renter population, these numbers are higher.

Anywhere between 15 and 44 housing units are declared unfit to live in by the City's Division of Code Enforcement each month. When a property is declared "unfit," it is unsafe and tenants must move if the violations are not fixed within the next few days. People moving from poor or unsafe housing conditions often end up in worse quality housing, or even end up homeless.

Additionally, an average of 11,000 residents are evicted each year in Syracuse. According to Maxwell's Community Benchmarks program, that's approximately 13-16.7% of the City's renter population. The largest cause of eviction is the tenant's inability to pay their rent on time. In Syracuse, almost 55% of renters spend 30% or more of their income on housing costs, including rent and utilities. This rate of housing cost burden is well over 60% in some census tracts, and drastically increases a resident's inability to pay rent when other financial emergencies arise.

The City of Syracuse Office of Accountability, Performance, & Innovation performed user research with residents at the Syracuse Northeast Community Center's food pantry. Through resident interviews, the need for funding for security deposits and other emergency housing expenses was identified as a major barrier to housing stability in Syracuse.

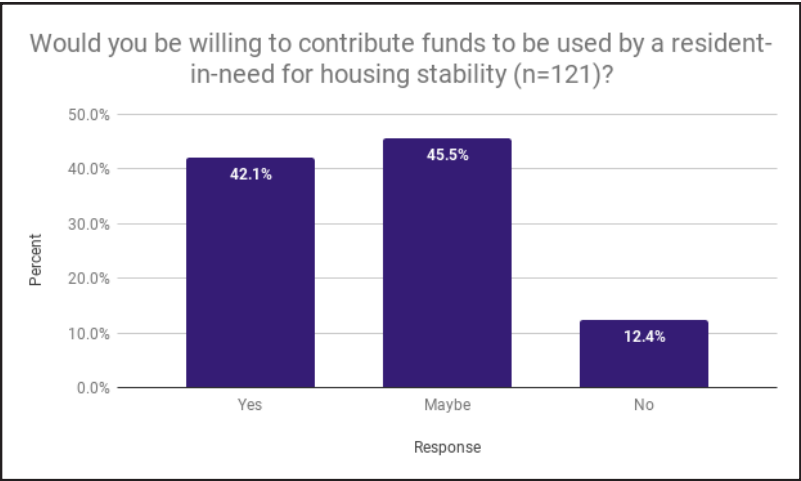


Emergency housing expenses could include stop-gap rent, utility bills, security deposits, or other moving costs, such as renting a moving truck or storage for household items.

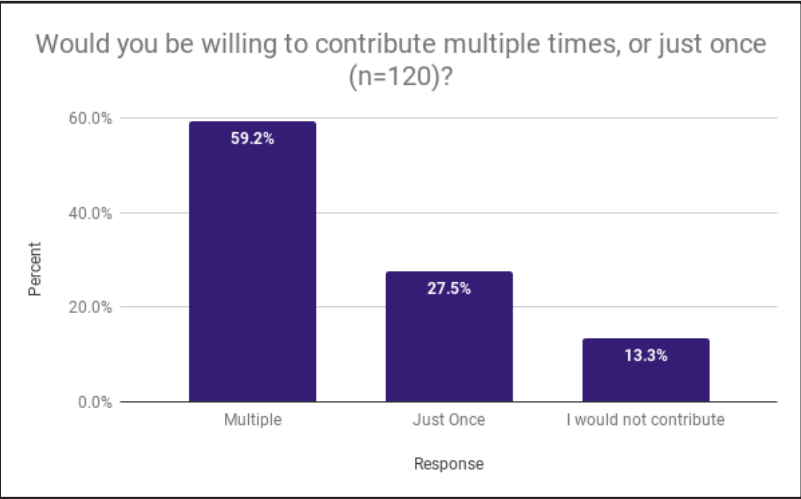
The City of Syracuse has a local law which states that landlords have up to 21 days to return security deposits or tell tenants that they will not receive a refund. Currently, when low-income renters move, they need start-up capital to cover their new security deposit and their first month's rent. They rely upon their previous security deposit being returned. However, many landlords take the full three weeks to return this money. This means that renters either move into poorer quality housing where they can afford the start-up costs (which leads to housing stability issues), or they couchsurf for a month until their previous security deposit has been returned (which leads to transiency issues).

Some sources of emergency housing funds and security deposit assistance already exist. The Onondaga County Department of Social Services has a program to aid with security deposits that can be accessed by residents once every 18 months. Other emergency housing funds are funded through the Department of Housing and Urban Development's Emergency Solutions Grant (ESG) and Community Development Block Grant (CDBG) dollars at different local nonprofits. Both of these sources are grant programs, and do not meet the demand of need for such funding.

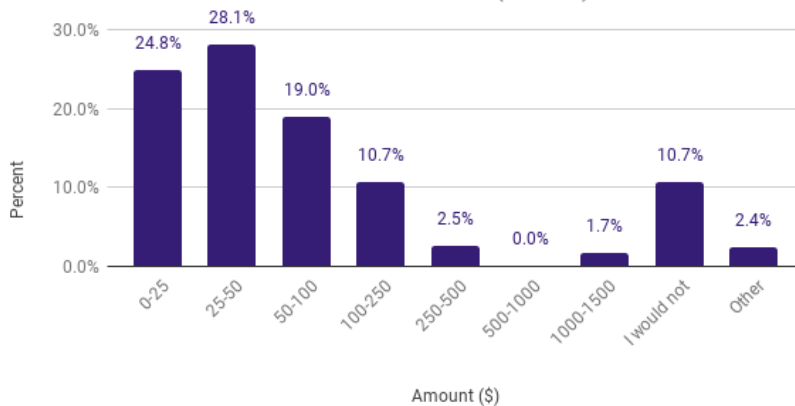
According to Matthew Desmond in his 2016 book *Evicted: Poverty and Profit in the American City*, people who have frequent forced moves are 15% more likely to lose their jobs, experience a 20% increase in material hardship, and are 25% more likely to have chronic housing problems. For children, experiencing three or more moves reduces their probability of graduating high school by 10-14%. One in 10 of Syracuse City School District students were homeless in 2016, more than any school district in the state outside of New York City.



In addition to the scale of need for this issue, there is also strong community desire to contribute to a solution. A survey of 121 Central New York residents showed that almost 88% of residents would be willing to donate to a fund for residents-in-need to use for housing stability expenses, and almost 60% said they would be willing to donate more than once. Results from this survey can be seen in the charts to the left and on the next page.



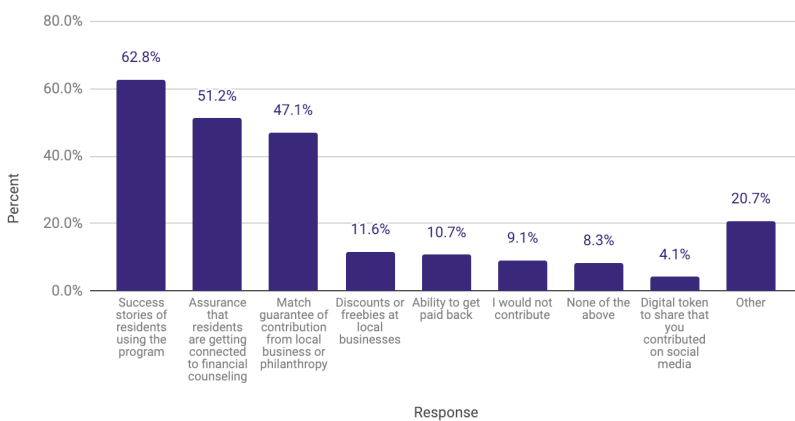
What is the maximum amount you would be willing to contribute at one time (n=121)?



"Other" responses:

- I have limited income
- I cannot afford to
- I need to get my own finances in order first, but would anticipate being able to contribute <\$25 within a year and within 3 years moving up to the \$100 range.

What assurances/perks would you NEED to feel comfortable and/or incentivized to contribute? (Please check all that apply)(n=121)



"Other" responses were largely in relation to program and resident accountability. Potential funders want to ensure that there is transparent accounting, the funds are going to housing stability cost uses, the funds are going to accountable property owners with safe and code compliant housing, and to know how residents could access the program and that there should be mechanisms to hold them accountable, such as having to pay some money back or being connected to financial counseling. A few other responses included that the donation should be tax deductible, and that it should be a loan where residents needed to pay interest or provide collateral.

#### Additional comments:

45 survey respondents left additional comments at the end of the survey. They fall into the following categories, in order of frequency:

- Good work! This is a community need
- I would give multiple times if I knew the program was successful
- I would want to have follow-up information on program and resident success
- Require a connection to financial counseling
- I would be happy with an incentive other than interest or being paid back
- Minimal administration, regulation, and overhead cost
- Good start, small solution to a larger problem
- Require some level of resident pay back to the fund
- Need criteria/screening for residents to access the program
- Would want to see it run by a local and trusted non-profit or philanthropy
- Make sure that money goes to accountable landlords and safe properties
- Have philanthropic involvement
- Would have to be a loan to contribute
- Would like to participate as a landlord
- Should not be peer-to-peer. Incentivizes bad behavior



# Introduction to Syracuse Token Economy | SyraCoin

The impetus for creating SyraCoins was a Startup-In-Residence challenge issued through City Innovate Foundation:

"The City of Syracuse seeks a peer-to-peer crowdfunding platform to connect low-income renters to funding for emergency housing needs. These funds could include money to cover rent, utilities, security deposits, or other moving costs.

The City of Syracuse would like to develop a platform that is similar to Kiva.org where renters could apply for security deposit or other emergency housing funds. Interested renters would apply to be part of this program. Residents with means in the community could donate funds to help residents-in-need with housing challenges. After donating, residents would receive a certain number of "Syracuse Tokens," redeemable for perks at local businesses and government services. The solution should include the generation, collection, and analysis of data.

A solution to this problem would strengthen housing stability for renters by making unexpected and necessary moves less traumatic, or reducing them entirely. Additionally, it has the potential to get renters into better quality housing. By addressing both of these issues, the City of Syracuse can help to reduce the negative impact of social issues related to housing instability."

Startup-In-Residence is a federal program that embeds startups within city government agencies in order to solve problems specific to a municipality.

City Innovate Foundation is a nonprofit that accelerates city governments, treating each social or infrastructural issue as a chance to create an effective public-private-partnership.

SyraCoins are digital assets which represent utility value, mostly within city borders. People earn SyraCoins by putting money into a city initiative to address a local challenge. Their helpfulness and goodwill are rewarded through digital assets that are evergreen, which means that SyraCoins retain and increase in value with time. The longer a city token exists, the more utility it can represent through local and national perks for in-kind value.

## SyraCoins are sustainable, equitable, inclusive and everlasting:

- 1) It allows **small businesses** to digitize a powerful coupon book system and co-market as an alliance; such activities are known to cause foot traffic and tourism to boom.
- 2) It allows **government agencies**, independent of elected administrations, non-profit grants and federal/ state budgets, to quickly attract funding around specific social issues and deploy capital in a discretionary fashion, with minimal need for impact assessment nor approval processes. This system assumes trust within entities that are closest to issues on the ground - for example - the Syracuse Financial Empowerment Center. This system assumes that administrative red tape, overhead costs and third party fees are detrimental to serving the public.
- 3) It allows **large enterprise businesses and transnational firms** to create in-kind partnerships with Syracuse, so that they can offer things like rideshare credits, airline discounts, large event tickets, etc. These firms benefit from corporate social responsibility PR, get tax breaks, get rid of previous generation equipment (e.g. Microsoft Surface tablets for dashboard registrations). These firms may also use the SyraCoin platform to attract a specific market and win loyalty, as well as have a platform for powerful marketing tied to social good. In the future, these partnerships would lead to SyraCoins being valuable for anyone to acquire anywhere, to encourage engagement with the city either by tourists or locals, and finally, to scale the system to other cities for their specific problem areas.

## Why Blockchain?

Public sector and nonprofit financing are currently ineffective due to reasons which are well known:

- 1) Traditional financial institutions including banks will not participate in small scale economies nor social causes since they must cover overhead costs and generate profit from fees.
- 2) Nonprofit grants last only as long as political agendas and philanthropic priorities which are often irrelevant in local contexts.
- 3) City programs tied to state and federal budgets cannot move speedily nor deploy funds discretionarily due to administrative paralysis of impact assessment and approval processes.
- 4) City programs tied to political agendas and specific administrations are unsustainable since they cannot survive transitions of power.
- 5) Procurement and RFP (requests for proposal) processes take too long due to onerous administrative costs.
- 6) Public-private-partnerships are difficult to forge due to unnecessary third parties.

SyraCoins enable cities to fundraise for themselves and to deploy capital into social projects. Benefits of a blockchain payment infrastructure, uniquely fit for public financing, include:

- No transaction fees
- No time lag on transactions
- No third party involvement
- Transparency through a traceable ledger
- Real time tracking of transactions and automated contracts

# Technical Solution + Coin Design

## Coin Issuance

Individuals ("Coin Purchasers") may purchase SyraCoins ("Coins") with US Dollars ("Fiat Capital"), which will contribute to a capital pool for the low-income assistance program ("the Fund"). Initially, the Coins will be purchased at a fixed price, to be determined. The Coins will be sold on an ongoing basis, with no cap on their supply.

There needs to be a central entity ("Issuing Authority") responsible for accepting said purchases, transferring Fiat Capital into the Fund, and distributing SyraCoins to Coin Purchasers.

There will be no official channel that offers redemption of Fiat Capital (i.e., conversion of coins back to US Dollars). However, Coin holders may find a buyer outside the channel (e.g., someone moving away from Syracuse may want to liquidate their Coins).

## Use of Coins

Merchants can offer discount programs ("Offers") in relation to purchases with Coins. Merchants may determine the nature of, and numerical values associated with Offers associated with the use of one Coin. For instance, a hairdresser may decide to offer 10% off women's haircut for one Coin; a carwash may provide \$15 off any carwash package for one Coin; a cafe may give a free donut for each purchase of coffee when presented one Coin. At time of payment for taking advantage of these Offers, the customer remits one Coin, along with his fiat amount.

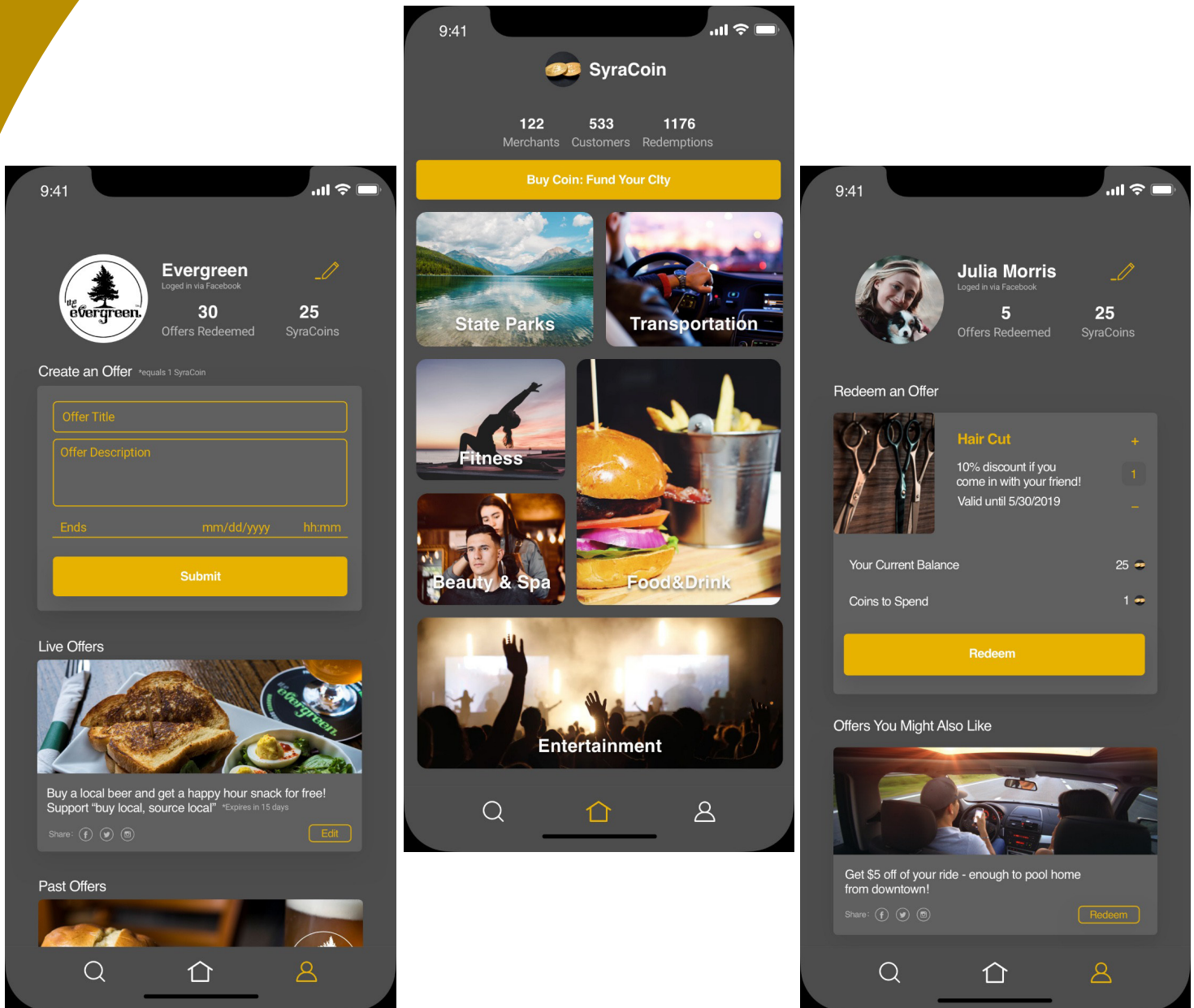
## Mobile App

There will be a mobile app ("App") that can be used by both Merchants and Coin holders. The App comes with the following functions:

- Handling of Coin purchases from Issuing Authority, and the corresponding Coin issuance
- Transfer of Coins to another address (an address represents the location of a Coin. Each Coin holder has at least one address)
- Display of current balance of Coins
- Reporting of past transactions
- Uploading of Offers by Merchants
- Review of Offers by Coin holders
- Sharing of promotions, redemptions and donations through social media and other popular channels

## Design Mockups

The following images show what a fully-developed mobile application for the SyraCoin program could look like. These images do not represent the minimum viable product described on the next page, which includes a mobile wallet application. For a fully-designed app, further capital investment will be required.



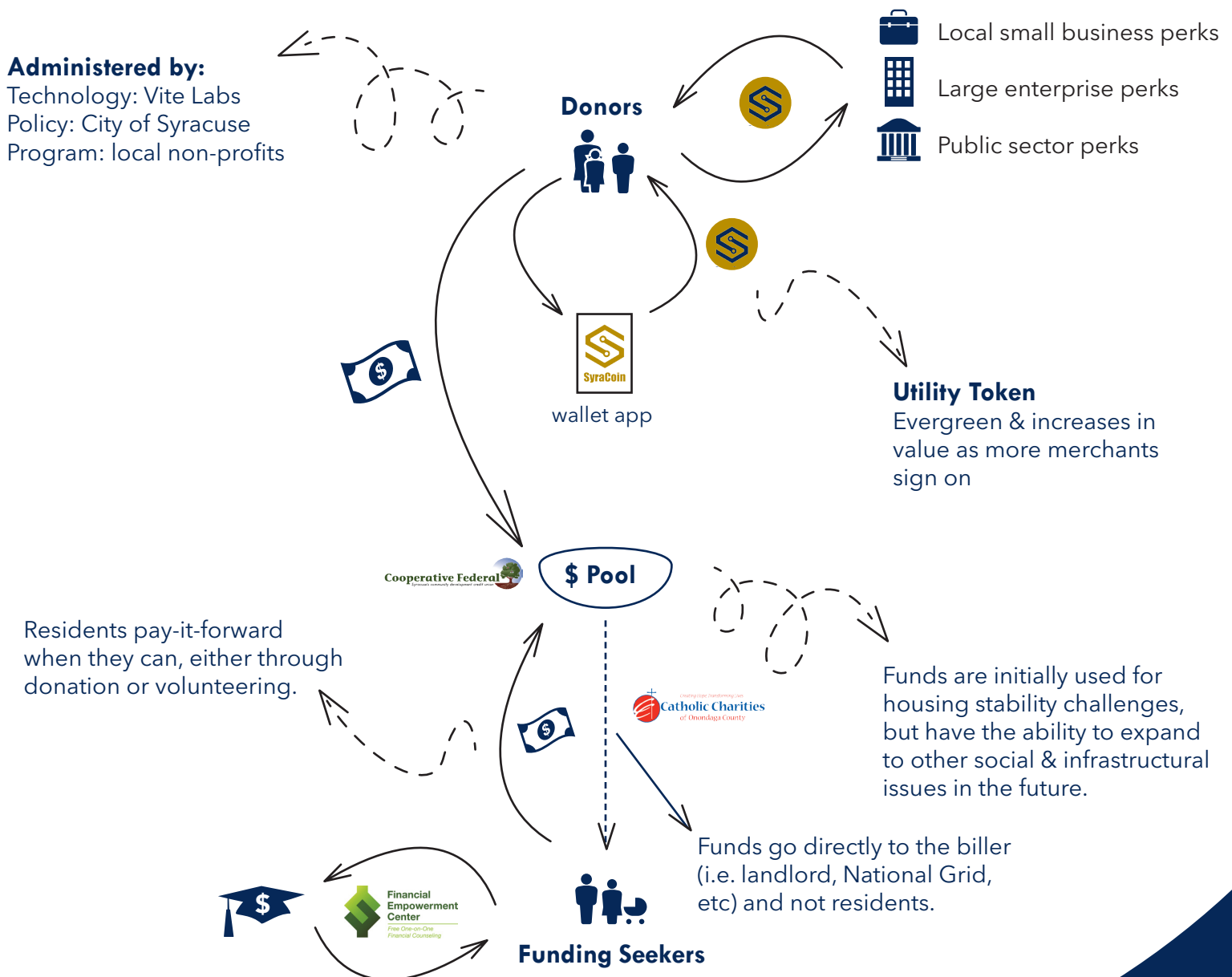
## Minimum Viable Product

**Coin Issuance:** The Coin Purchaser first downloads the Vite Wallet App and obtains a Vite address in the process. Then, the Coin Purchaser visits a website to buy Coins. The website collects various pieces of data about the Coin Purchaser (including the Vite address) and instructs Coin Purchaser to wire or ACH Fiat payment to a designated bank account. An operator sees the Coin purchase request in the backend, and distributes Coins to the appropriate address.

**Uploading and Review of Offers:** Merchants advertise their Offers via channels of their choosing (social media, in-store notices, street-level displays, etc). In the case of social media, they can use the hashtag #Syracoin for an easy search.

All other functions as described in the Mobile App section above are captured in the Vite Wallet App.

### “Syracuse Helping Syracuse”



# Program Design

## Funder Experience

A potential funder can go to the SyraCoin dashboard and see portfolio of local benefits and national in-kind perks of purchasing SyraCoins and donating to a local social cause. The dashboard and App (described above) allows the user to easily buy SyraCoins and understand

- 1) where funds will be pooled and who controls this pool, and
- 2) what housing stability cases are being addressed and how Syracuse is improving on a long-term macro scale.

The funder will then have a wallet of SyraCoins redeemable for various government, small business and large enterprise perks in the Syracuse community. They will also be able to revisit the dashboard to see stories of residents who have benefited from their donation, see their own record of donations, and purchase more coins at any time.

The program will be housed and issued by a contracted, local non-profit organization, and the funding pool will be maintained at Cooperative Federal Credit Union, a local community credit union in Syracuse. The 501(c)3 status of the local non-profit will allow donations to be tax deductible for funders. Potential partnerships with local philanthropy and corporations will allow for funders donations to be matched, doubling the impact of their dollars on the Syracuse community.

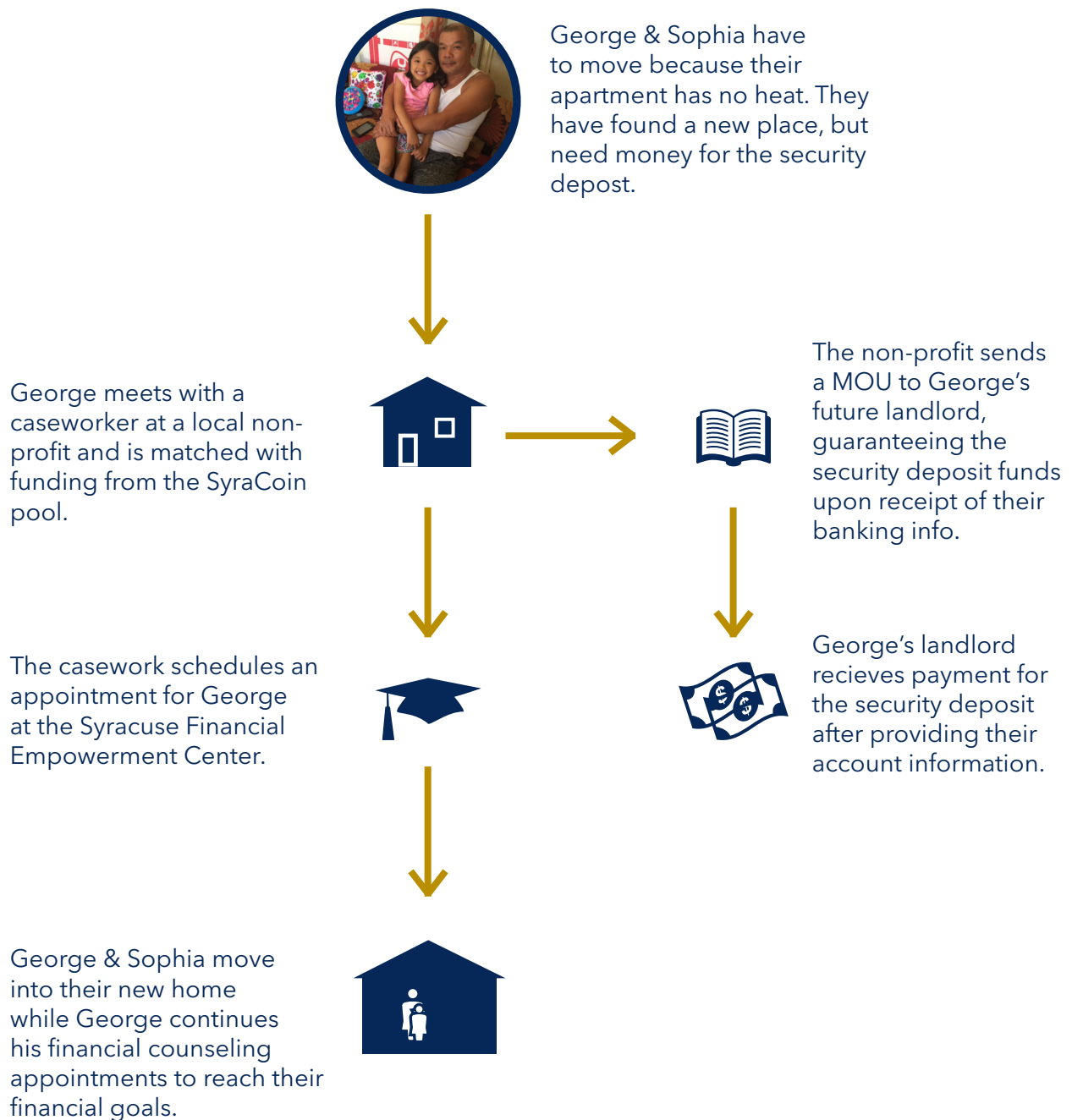
## Resident Access to Emergency Housing Funds

In order to access the pool of emergency housing funds, residents-in-need must meet with a caseworker at the contracted, local non-profit agency. A case worker will conduct a needs assessment to determine who is in most need of financial assistance and a list will be created of applicants needing funding if necessary. Those determined the most in need by the needs assessment will be prioritized first. Proof of the applicant's emergency housing expenses (i.e. utility bill, notice from landlord, etc.) is required. The caseworker will also refer and assist the applicant in scheduling an appointment at the Syracuse Financial Empowerment Center (SFEC) for financial counseling. The case worker would assess the applicant for all possible monies that they qualify for, and issue money from the SyraCoin crowdfunding pool when other sources are exhausted.

Once it is determined that the applicant is using funds from the SyraCoin crowdfunding pool, a memorandum of understanding will be issued from the non-profit or SFEC to the entity receiving the funds (i.e. a landlord for rent or security deposits, National Grid for utility bills, etc) and requesting the account information to transfer the money to.

Once payment has been made, residents are recommended to continue with financial counseling sessions with the SFEC. The local non-profit agency will help track resident outcomes and stories through the use of a three month plan and check-in for the program. Residents are also expected to make an effort to "pay forward" the money they received, whether through donating back to the SyraCoin fund if financially able, or through volunteering with local nonprofit and community agencies.

## Resident Access to Emergency Housing Funds: How the process works





## Key Players + Benefits

### Key Player

### Benefits

City of Syracuse

- innovative and highly welcomed method in sourcing funding for a pressing problem
- strong PR and branding effect for the city, as the first in the nation to implement a decentralized city token with practical use case
- alignment with existing plan to become the first fully integrated smart city in the United States

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Recipients of Money

- reduction of unnecessary moves and evictions, and a boost in quality of life for low income residents
- stabilization of housing

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Housing Non-profits

- new revenue stream for assisting local residents
- increased investment in capacity to do their work

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Landlords

- guaranteed source of funding for rent & security deposits
- stabilized tenant base

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Charity Donors

- new avenue for providing monetary assistance to one's own city with immediate and tangible benefits in return
- simple and easy way to invest in the future of one's own city in order to "clean up your own streets" and pay it forward

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Local Small Businesses

- new channel for marketing and promotions
- stronger sentiment for source local, buy local with city pride emblematic of the SyraCoin
- increased foot traffic

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Local Residents

- positive sensation for new development in the city
- potential development of neighborliness and goodwill through rewarding of tokens by peer citizens



# Timeline: Development + Adoption

## **Preparatory Work and Partnerships | March ~ May 2019**

- Arrange partnerships with municipal agencies including Financial Empowerment Center and Cooperative Federal Credit Union
- Arrange initial set of local small business, large national enterprise and public sector perks redeemable through SyraCoins
- Big press event at the end of March; talking about this publicly in Syracuse (March 27)

## **Technical Research and Development | April ~ May 2019**

- Design and launch token economy
- Design and launch dashboards for 1) donors, 2) funding seekers, & 3) entities offering promotions
- Design and launch any automated processes and/or smart contracts for execution

## **Pilot in City of Syracuse | June ~ August 2019**

- Launch event with all partners
- Gather data about the usage of SyraCoins and drive adoption for both seekers of funding and donors
- Create awareness and excitement through local and national media, as well as physical signage
- Track the initiative and solidify who the administrators are in terms of government, operations and technology

## **Sharing and Scaling**

- Reveal findings and outcomes at Startup-In-Residence Demo Day and other large platforms, for example, the United States Conference of Mayors
- Build further partnerships into Syracuse Token Economy in order to increase the utility value of SyraCoins
- Introduce the concept of city tokens to other municipalities with Syracuse as a first mover and example

# Vision to Scale: Token for All Cities

Municipal token economies empower cities to raise funding quickly and to deploy capital in a discretionary fashion depending on the challenges faced by its residents at any moment in history. Such challenges are twofold: social issues and infrastructure projects.

Unlike private companies, governments cannot choose their own customers and they must exist in perpetuity to provide stability for generations. Therefore, cities must be self-sufficient and self-directed in their ability to solve local problems independently of external third parties.

City tokens are like universal coupon points that are evergreen. When someone buys a city token, they are investing into their own society; that capital is funneled into a pool of money administered by a government agency, semi-governmental organization or public-private-partnership.

The pool of money built through a municipal token economy grows throughout the lifetime of the city token, which of course, lasts as long as the city stands. This pool of money, through payment infrastructures and smart contracts enabled by blockchain, can be deployed without time lag nor fees. Further, blockchain enables the automation of many administrative processes that safeguard transparency and trust.

SyraCoins are built to address housing instability in the City of Syracuse, however, building local pride and loyalty as residents catalyze their own community is a priceless benefit outside of immediate financial impact on social programs. Capital gained through SyraCoins may be deployed in the future for other social issues, infrastructure projects and any other municipal cause based on historic context.

Our intention is to prove this use case of blockchain technology and to create the first successful utility token for a municipal government in the United States. Our vision is to share this knowledge with all other cities, tailored to their particular administrative structures and locally meaningful challenges.

# Partners + Acknowledgments

