

Initiative – Prosocial Cryptocurrency a/k/a City Coin

Issue (what is the problem or issue we are trying to solve?):

- 1) Excessive leakage of money from local economy
- 2) Critical natural resources are at risk. Most notably for Santa Fe and the southwest is fresh water.

Key Insight (fact, data or other research basis for innovation):

- 1) Cryptocurrency is now a viable monetary system, and
- 2) Broad-based financial incentives are essential to large scale change

Goal (what exactly are we trying to accomplish?):

- 1) Reduce leakage from 48 cents on the dollar to 40 cents
- 2) Reduce per capita water usage by 25% in 10 years

Metrics (what will we track to see if we are accomplishing goal?):

- Quantitative: Annual IMPLAN data assessing leakage. Annual analysis to quantify results of initiatives versus hiring service providers. Quarterly water usage reports from City Water Department.
- Qualitative: Annual survey to evaluate residents' opinions of cryptocurrency.

Target Users/Beneficiaries/Residents:

- **Primary beneficiaries: Individual residents and merchants of Santa Fe.**
 - Residents benefit from payments that promote desirable behavior.
 - Merchants benefit from increased local business.
- **Secondary: Whole community. We all benefit through the stronger local economy and/or more efficient use of natural resources.**

Description of the solution/activity/initiative: As an overview, Prosocial Cryptocurrency ("PSC") involves the city allocating an amount of money (ex: \$100,000) to seed a cryptocurrency ("City Coin") that can only be used inside the city. Residents can earn City Coin in one of two ways.

1. Conserve or otherwise contribute positively to the management of key resources, such as reducing water consumption, or
2. Perform services that the city would otherwise hire vendors or employees to provide, such as landscape care of local parks or picking up trash on the streets.

Residents can spend their PSC at any locally owned business. The business can in turn spend the PSC with another business. At any time, a business can redeem the PSC for US currency.

Summary of How PSC works:

- How does currency get created? The currency is created based on the number of tokens authorized by the City of Santa Fe. We will start the program with a limited number of tokens and tie the management of the tokens to economically desirable activities – things that create value.
- How do people spend their currency and on what? Santa Fe will extend its business license so that all locally owned merchants within the city will be automatically enrolled into accepting the PSC as payment for goods and services.
- Can currency be converted to dollars? Yes. Merchants who receive the currency will be eligible to convert the current into dollars. To promote circulation of the currency only merchants will be eligible for converting cryptocurrency into US Dollars. The City will adjust the value of the network in a way that is based on the economic benefits of the resource.
- How may it be connected to resources? A central argument is that the use of natural resources costs money and the conserving resources should result in a shared economic benefit. Suppose, for example, that a home uses 70g/water/day for the average family and the city wishes to reduce that number. The City would then establish a payment tied to a targeted reduction – and a penalty for an excessive increase – in which the payment would be provided to the legal entity on record for the entity.
- How may it promote other prosocial behaviors? The city spends money on a variety of services that enhance the quality of life such as youth mentoring, maintaining parks, and cleaning public spaces. The city could redirect a portion of the money spent on those services (ex: \$100,000 for park maintenance) to seed the PSC. Residents can earn PSC by signing up and delivering services comparable to employees or vendors.
- How does it prevent leakage? Let's say a home realizes a goal of reducing water and receives a payment from the City of \$100 in Santa Fe cryptocurrency. The homeowner could only spend the money in Santa Fe, such as spending \$100 on purchasing groceries or a new ladder. The merchant would then convert the money into cash by returning the cryptocurrency to the city. The resultant cycle of City → Homeowner → Merchant → City results in zero leakage. Residents are not motivated to save PSC because there is no accumulation of value.
- Is it subject to speculative investing like bitcoin? PSC is immune to speculation because the currency can only be acquired through prosocial behaviors and the value of the currency is fixed by the city upon distribution to the participants.
- Will more injections of capital be required?
 - For resource savings efforts, the purchasing power of the program will degrade via normal inflation. Accordingly, and to maintain purchasing power, the city will need to adjust the pool of money and associated payouts to inflation. This can be accomplished by measuring the positive economic impact of the program. Consequently, there is a need for ongoing funding, however, the economic and social impact of savings the desired resources (ex: fresh water) would be worth the financial investment.

- **For services replacement efforts, the city would have paid the money to other parties, so there is no net effect on the city's finances. There is a positive effect on decreasing leakage and increasing local economic activity.**

Benefits:

- *Functional (how does this make work and/or life better?):* This project would be implemented using the Ethereum platform (<https://www.ethereum.org/>) to create an easy to use, highly secure cyptocurrency. This currency will also leverage Ethereum's capability for smart contracts to ensure that payments are made only upon and for approved actions, such as reducing water users or engaging in other prosocial behaviors such as paying people in Santa Fe currency to clean parks, pick up trash on streets, etc.
- *Emotional (how do we expect people to feel after receiving functional benefit?):* Proud, responsible, connected
- *Financial (how much revenue, profit or wealth does this create and/or cost savings does it generate, if any?)* The program will generate increased wealth for local businesses by reducing leakage and promoting local goods (https://en.wikipedia.org/wiki/Circular_flow_of_income).
- *Social (how does this benefit the community at large?):* The PSC benefits the larger community by promoting the more efficient use of natural resources and to improve the quality of life for everyone through incentivized volunteerism. These benefits will accumulate in increasing larger circles of positive impact as the current is used to promote sustainability.

Note: Ethereum provides a complete, step-by-step toolkit and process for creating and managing a cryptocurrency. Once we have identified the policies of our system we'll follow the steps outlined here for a pilot of the concept: <https://blog.ethereum.org/2015/12/03/how-to-build-your-own-cryptocurrency/>.

Alignment:

- *How well does this fit and expand Santa Fe's culture and community?* Conserving and respecting natural resources in a deeply held cultural value in the American Southwest, which has historically managed natural resources in a thoughtful manner.
- *Briefly explain how this can be expanded to other cities. Will it be relatively easy or hard?* It will be relatively easy to expand this program to other cities.