
STRONGHANDS™ WHITEPAPER

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Abstract

StrongHands is a free open-source project that seeks to become a long-term energy-efficient project. Built on the foundation of Bitcoin, StrongHands offers the proof-of-stake concept to help further advance the field of cryptocurrency.

Through our community-based ecosystem, StrongHands intends to encourage users to live a healthy lifestyle via accountability and motivation from peers, SHND coin rewards and community cohesion.

The StrongHands ecosystem is built around communities, with each differing in regards to goals, examples being: running, weight loss, yoga, meditation, etc. Users initially complete a very short SMART goals survey form which will help serve as a blueprint for accountability and to better identify the community that best fits each user.

Each community is rewarded as a whole if a set percentage of its members complete their short-term goals. This will encourage members to motivate and support one another.

The StrongHands app is used to securely communicate with community members, record goals, and check in by scanning QR codes, such as at the front desk at the gym, on golfing greenways or a variety of trails.

SHND rewards can be spent within the StrongHands marketplace to purchase a variety of health and fitness items, which will include advice from wellness professionals such as personal trainers and coaches, nutritionists, and counselors.

StrongHands is working hard in its effort to establish partnerships with fitness clubs, health and wellness spas, and fitness retreats.

A Worldwide Epidemic

Worldwide, there are nearly 2.1 billion people, 30% of the world's population, who are either obese or overweight ⁽¹⁾. From 1980 to 2013 rates of overweight and obesity among adults increased for both men (29% to 37%) and women (30% to 38%). One study estimates by 2030 over 51% of the world's population will be obese ⁽²⁾. The social and economic costs of this can be broken down into three distinct categories:

Direct Costs of Obesity

- Costs to the community, related to the diversion of resources to the diagnosis and treatment of diseases directly related to obesity, as well as, the prevention and treatment of obesity itself ⁽³⁾. In the United States alone, overweight and obese individuals cost the country \$78.5 billion in 1998. With rising overweight and obesity rates, this number increased to \$147 billion in 2008 ⁽⁴⁾.

Indirect/Societal Costs of Obesity

- These costs are related to the loss of productivity caused by absenteeism, disability pensions, and premature death.

Personal Costs of Obesity

- Obese subjects may earn less than their lean counterparts because of job discrimination (related to the stigma associated with obesity, or due to diseases and disabilities caused by obesity). Many insurance companies (particularly life insurance) charge higher premiums with increasing degrees regarding body weight. Obesity is further related to poor physical functioning and limitations in daily life. Some of these require assistance or adaptations which may be costly for an individual.

Compared to direct costs, societal and personal costs vary on the population being studied, and the costs are dependent on ethnicity, gender, socioeconomic status, and citizenship.

Relationship Between Mental Health and Physical Health

Physical health is defined as body weight, any mental and/or physical illnesses, and diet. The National Institutes of Mental Health estimated the global cost of mental illness to be \$2.5 trillion in 2010 ⁽⁷⁾. While not all mental illness contributes to poor physical health, there is research that shows there is a bidirectional link.

- Rates of peer victimization/bullying occur more in obese than non-obese adolescents. As bullying is a predictor of depression, obese adolescents are at higher risk of depressive disorders.

- Body dissatisfaction is a reliable predictor of depression among adolescents.
- Compared with normal weight adolescents, obese adolescents have a higher prevalence of school and mental health problems, including poor academic performance and self-esteem, anxiety, depressive disorders, and a greater number of reported suicide attempts ⁽⁵⁾.
- Obesity and depression have a significant and bidirectional association. Maximal evidence existed for the association between depression and obesity with longitudinal studies demonstrating a bidirectional link between the two conditions. The evidence is modest for anxiety disorders and inadequate for other psychiatric conditions. Gender appears to be an important mediator in these relationships ⁽⁶⁾.
- A diet characterized by a high intake of fruit, vegetables, whole grain, fish, olive oil, low-fat dairy, antioxidants, and low intakes of animal foods was associated with a decreased risk of depression. A dietary pattern characterized by a high consumption of red and/or processed meat, refined grains, sweets, high-fat dairy products, butter, potatoes and high-fat gravy, and low intakes of fruits and vegetables was associated with an increased risk of depression ⁽⁸⁾.
- Diabetes, heart disease, and other chronic diseases show a causal relationship ⁽⁹⁾.

Social Networks and Community Engagement

There is little to no research on the effects of a supportive online community and its relationship to health and wellness. The majority of research focuses on the negative aspects of online social networks and their relationship to the mental and physical well being. However, research involving offline social networks shows a clear correlation between belonging to a community and ones overall health and wellness.

- Social networks play a critical role in an individual's health and wellness. A meta-analysis and systemic review found a reduction in BMI among individuals connected to their healthcare providers via an online social network ⁽¹⁰⁾.

The CDC has many social outreach programs, all with high rates of success. These evidence-based community prevention programs could save the United States alone more

than \$16 billion annually within five years — a \$5.60 return for every \$1 spent ⁽¹¹⁾. Below are some examples of current CDC programs.

- **Million Hearts Campaign:** A five-year national initiative, co-led by CDC and the Centers for Medicare & Medicaid Services (CMS), aimed at preventing one million heart attacks and strokes by 2022. The program estimates that it prevented as many as 500,000 heart events during the first five years of the program, 2012–2016 ⁽¹¹⁾.
- **State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health:** These grants fund state initiatives to coordinate the care and prevention of these diseases across multiple community institutions, including schools, early childhood centers, worksites and health systems.
- **Preventive Health and Health Services (PHHS) Block Grant:** This program provides every state with flexible support to address what they determine to be their most important health needs. In FY 2016, nutrition and weight status was a top funded health topic area, receiving more than \$10 million of PHHS grant funds.

Unhealthy lifestyles contribute to an ever-growing and out of control worldwide economic healthcare burden. Overweight and obese individuals are at risk for chronic physical illness, as well as issues associated with mental illness. Mental illness is correlated with an unhealthy lifestyle. Community and social engagement is a powerful factor in lifestyle change.

StrongHands – Strong Together

StrongHands is a tightly knit global community with heavily active Discord, Telegram, Facebook, Twitter and other social media channels. We are harnessing the powerful force of our online community so as to help motivate people around the world to radically change their lifestyle.

StrongHands App: Cornerstone of our Ecosystem

StrongHands consists of many communities, differing based on their goals. A small example of the community groups would include groups that focus on either running,

weightlifting, yoga, weight loss, weight gain, meditation, or an overall wellness-based lifestyle.

StrongHands, Strong Communities:

- User submits a request to join a group. The request includes their goals, the challenges they face, and how they can be motivated and supported.
- Requests are always accepted, no potential member is turned away unless the group is at max capacity. Capacity is self-determined by the group based on voting.
- The community is rewarded as a whole on the success rates of its members. This enhances group cohesion and support, as success for one is success for all. Rewards are paid in SHND. Individually, the rewards are small. However, the community can pool their resources to donate to a charity of their choice or purchase items on the StrongHands marketplace.
- It would be unrealistic to expect a community of 50 people to know one another well, and actively engage with every single person. Communities are subdivided based on more specific criteria relating to goals. As an example of what this will look, John wants to run a 10-minute mile one day. He joins a running community and will then join the subgroup within the community for people over 50 years old. He then finds another member who also has knee problems, which in turns enables the two to form a buddy system. John is part of a larger community which he communicates with but is more involved in his sub-group with 2–6 close online partners.

QR Codes for Fact Checking:

- Recognizing and rewarding physical activity is difficult. It cannot be self-reported, as users could easily cheat. Our solution uses scannable QR codes. QR codes are present at the front desk of a fitness facility. As the user scans their gym tag, they scan the QR code with the StrongHands app. This records that the user made it to the gym, and their community is notified that they checked in. This system keeps community members accountable to each other, as everyone can see if someone has checked-in, or not.

- An individual with no gym membership can print a QR code specifically assigned to them and then leave it at any location where they perform an activity. Locations are geo-tagged and must be far enough away from a home location so as to prevent cheating. Example, Michael enjoys meditating in the woods. He has a QR code printed, put in a waterproof container, and left in an inconspicuous spot. Users must scan the code to check in to the community. This is a work in progress and is subject to change.

StrongHands Marketplace:

- The marketplace sells sports supplements and digital media. Additionally, services provided by personal trainers, nutritionists, and counselors can be purchased with SHND. Digital collectibles can be purchased as well and sold peer-peer.
- Health care and wellness professionals are screened by StrongHands staff via remote interviews. All have degrees and/or are accredited in their field.
- Supplements sold on the marketplace are created and owned entirely by StrongHands. Since we own the supply chain, products are cheaper with the savings being used to pay community members for engagement.
- The Marketplace will eventually offer SHND->BTC atomic swaps, which the user can then exchange to fiat currency using a variety of exchanges.

StrongPay

- StrongPay is a payment solution for businesses to accept cryptocurrency in the form of Bitcoin and SHND.

Incentives for Businesses and Wellness Professionals

- Wellness professionals selling their services on the StrongHands Marketplace have access to a large community utilizing a universal and simple payment system.
- Wellness professionals set their own rates and services. Imagine having a personal trainer, nutritionist, and counselor all easily reachable in one app. If a user has a

question during the day, they send their designated contact a message and receive a response within a very limited amount of time.

- Wellness professionals are paid for tasks that take only a few minutes. Answering a question via direct message for a \$.10 or \$.25 equivalent in SHND quickly adds up.
- Businesses can sell their sports supplements or gear on the marketplace. Listing items will cost a minimal fee and will instantly give your product access to an enormous community. Please note, any business that wishes to add a product must be in compliance with our rules and regulations.

Community Anonymity, Security and Privacy

When signing up, an individual chooses a permanent username. They get a profile page which includes their community and sub-groups and any other information they wish to share publicly. The only requirement to sign up for StrongHands is a willingness to engage with others. Age, location, nationality, are all optional inputs.

StrongHands Rewards System

Users are rewarded minimally for their personal success, and more heavily for their communities overall success. This incentivizes each member to motivate and engage with other community members, thus building a strong close-knit community over time.

Quantifying Success, SMART Goals

Users choose groups based on similar goals and set SMART goals for themselves upon joining. Let's use John as an example as we address the five goals that he work towards; Specific, Measurable, Action-Oriented, Realistic, Time Related.

- **Specific:** John's ultimate end goal is to run a 10-minute mile. To do this he will start by walking 2 miles, 3 times a week, working his way up to running/walking one mile 3 times a week.
- **Measurable:** John will try to run a full mile, as fast as he can, once a week and record his progress.

- **Action-Oriented:** John will achieve this by going to the gym 3 days a week. Leaving his shoes by the door as a reminder, and checking in with community members to keep him accountable.
- **Realistic:** John can't run a complete mile yet. A 10-minute mile after 3 months of training is realistic for someone like John, who has no chronic health conditions or serious physical ailments.
- **Time-Related:** John gives himself 3 months to reach the end goal of a 10-minute mile.

While it is impossible to record these specific physical activities, the community can fact check John based on his QR scan and pictures of the treadmill he sent to the group. Community members are notified that John has checked in with the QR code, they see the picture of the total time and mileage on the treadmill, and confirm he accomplished his goal. Members will congratulate John and he receives a small amount of SHND coins from the app.

Preventing Rewards Abuse

Due to the fact that this is a very real problem for semi-honor based systems, the solution is multifaceted.

- Rewards per individual are minimal, not much incentive to cheat.
- QR codes require the user to transport themselves to a different location
- Community members can report a user which seems suspicious in their generation of rewards or activity.

Athletic and e-Sports Ambassadorship Program

The StrongHands Athletic Ambassadorship is open to recognized, world-renowned athletes who wish to promote SHND and be an active part of the community.

Roadmap for Adoption

It is critical StrongHands maintains and continues to grow an active user base, as active users are critical to the ecosystem.

- Front desk placement of QR codes for app download and check-ins. Starting with local fitness chains and working up to larger national chains. Benefits for gyms include listing their products within the StrongHands marketplace.
- Ad campaigns targeting high school and college cohorts. Sporting events, team sponsorships, and local community events are all examples of exposure.
- Speaking engagements at fitness expos worldwide.
- Marketing directly to health and wellness professionals.

Barriers to Success

- Increasing app traffic and an active user base - Purchasing ads, direct exposure to potential users in a fitness facility, ambassador program, and speaking engagements at fitness and tech expositions.
- Expensive fees for large exchange listings - Community fundraising
- Large total supply - Supply reduced with the SHMN coin swap, possible future fork to greatly reduce staking rewards and further decrease supply.
- iOS app development, approval for listing on the app store.

StrongHands Research Study

StrongHands is dedicated to creating a protocol that works and works well. To do so we need to conduct research and gather data. Our platform will compile extremely important data, which has never been done before. Users success depends on their internal motivation, but also largely on how they interact within their community and its members. Motivational tactics and their rates of success in terms of lifestyle change will be recorded and analyzed as to better understand which tactics are more successful in promoting a

healthy lifestyle. StrongHands will essentially be running the first of its kind longitudinal study looking into the effects of online community engagement and lifestyle change.

Community Fund

Since the StrongHands project did not conduct an ICO, we lack all the necessary financial resources to jump-start the project. Through a donation-based community fund, we hope to raise enough capital to develop StrongHands at a faster pace. The tentative use of the fund will be as follows:

- Exchange listings
- Recruiting advisors and team members. Travel expenses for expositions and speaking engagements.
- Conducting research into the efficacy of StrongHands and online community engagement as it relates to exercise adherence. This research serves to strengthen the StrongHands ecosystem by ensuring our protocols are the most successful in terms of user engagement and goal achievement.
- Project development
- In order to support a healthy coin supply there is anticipation of future coin buyback and/or burning. This would occur once the SHNDX exchange is fully operational, with a time frame being one year of service and operation.
- Rewards for community engagement

All use of the funds will be extremely transparent, with the wallet's public address published so that anyone can view the balance and expenses. StrongHands will publish all fund spending every two weeks in a newsletter.

StrongHands Team

In a great generation, StrongHands is inspired and supported by of over 12,000 community members who believe in financial freedom, friendship, love, compassion, and a better world without oppression against the poor and those in need.

StrongHands is a multi-level, worldwide community whose purpose is to motivate and encourage individuals to pursue a healthy, well-balanced lifestyle combined with financial freedom for all individuals involved in it.

The StrongHands Whitepaper

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