

# **The Basic Nutrition Token: White Paper**

**A proposed blockchain solution to prevent food insecurity**

By Impact Cardinals Organization

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## Abstract - Ending hunger is not a utopia:

The world disposes today of enough wealth, technological advancements, and means to tackle an issue such as hunger. Each year, the world produces 1.3 billion tons of food. However, half of it will be enough to feed the world's population. Food insecurity is not an availability issue but a means of distribution and accessibility. People are dying of hunger not because of insufficient food on earth but because they cannot access it. It is a shame to know that today, half of the world's population is still affected by hunger when we are at a time when there have never been that many resources produced each year. According to the United Nations, 25,000 people die of hunger daily, including more than 10,000 children.

Today, different methods and technologies can help us tackle hunger more effectively and prevent food insecurity. Particularly, the blockchain technology can be a way to answer the challenge.

The following report presents a unique method, using blockchain technology to inspire a new kind of philanthropy model that leverages blockchain to tackle some of the most urgent issues of our time that must be addressed worldwide.

**Important Disclaimer:** This white paper is the first version. Therefore, it may lack essential information about the development of the Basic Nutrition Token, the blockchain system on which it will be developed, etc. However, because the BNT is still in an early development phase, this first version of the white paper mainly aims to describe the scope of Project and not yet the technical aspect of its development.

# 1. The Challenge

## 1.1 The challenge of food insecurity

Hunger, a haunting reality that continues to plague our world, remains an acute and complex issue even in the 21st century. Despite technological advancements, increased global connectivity, and significant progress in various domains, the scourge of hunger continues. Understanding the intricacies of this problem and recognizing its significance is crucial in uniting our efforts to combat this pressing global challenge.

### **The Issue of Hunger Today:**

In an era of plenty, it is disheartening to acknowledge that approximately 811 million people worldwide suffer from chronic hunger, according to the United Nations. This staggering number reflects a harsh reality, as millions face each day with uncertainty about their next meal. Hunger is not confined to underdeveloped or impoverished regions; it knows no boundaries and impacts people from diverse backgrounds, regardless of age, gender, or nationality.

### Main Concerns:

- **Humanitarian Crisis:** Hunger is not merely an issue of physical deprivation; it also exacerbates existing humanitarian crises. The lack of adequate nourishment compromises immunity, leaving vulnerable populations more susceptible to diseases and exacerbating health challenges.
- **Interconnected with Poverty:** Hunger and poverty are deeply interconnected, forming a vicious cycle that is challenging to break. Poverty leads to limited access to resources, including food, and insufficient access to food perpetuates poverty, creating a relentless cycle that traps communities in a state of deprivation.
- **Social and Economic Impact:** Hunger adversely affects socio-economic development. Malnourished individuals face diminished cognitive abilities, hindering their educational attainment and limiting their potential to contribute positively to society and the economy.
- **Environmental Consequences:** The issue of hunger is also linked to environmental concerns. As populations increase and arable land decreases, ensuring food security becomes increasingly challenging. Unsustainable agricultural practices, deforestation, and climate change further exacerbate the strain on food systems.

### The Importance of Addressing Hunger :

- **Ethical Imperative:** Ensuring access to sufficient and nutritious food for all is not just a moral responsibility; it is an ethical imperative. We must recognize the inherent dignity

of every individual and strive to provide them with the basic human right of food security.

- **Achieving Sustainable Development Goals:** Hunger eradication is integral to achieving the United Nations' Sustainable Development Goals (SDGs). SDG 2 specifically targets ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture by 2030.
- **Social Stability and Peace:** Hunger-induced poverty and social instability are often linked to conflicts and mass migrations. By addressing hunger, we contribute to building stable and peaceful societies, reducing the risk of tensions and violence arising from resource scarcity.
- **Economic Growth:** A well-nourished population is more productive, healthier, and better equipped to contribute to economic growth. Investment in hunger alleviation yields long-term benefits, as healthier individuals become the driving force behind thriving economies.

The issue of hunger is far from being an isolated problem; it is a multifaceted global challenge that demands a comprehensive, concerted effort. Addressing hunger requires collaboration among governments, non-governmental organizations, the private sector, and individuals worldwide. It is incumbent upon all of us to recognize the urgency of this issue and take action to ensure that no one is left behind in the fight against hunger. By doing so, we embrace a future where food security is a reality for all, nurturing healthier, happier, and more resilient communities worldwide.

## 1.2 Environmental issues regarding food insecurity

Hunger and climate change are deeply interlinked, creating a vicious cycle that exacerbates each other's impacts and threatens the well-being of communities worldwide. However, within this challenge lies an opportunity for transformative change. Addressing food insecurity and hunger can be a potent tool in combating climate change and healing the environment. This section explores the intricate connection between hunger, climate change, and environmental issues, emphasizing how empowering food security initiatives can pave the way toward a more sustainable and resilient world.

### 1. Climate Change's Impact on Food Security

Climate change poses a formidable threat to global food security. Increasing temperatures, altered rainfall patterns, and extreme weather events disrupt agricultural systems, leading to reduced crop yields, decreased food production, and food shortages. In regions already facing food insecurity, climate change can exacerbate the situation, pushing vulnerable communities further into the clutches of hunger.

### 2. Deforestation and Land Degradation

Deforestation, often driven by agricultural expansion and resource exploitation, is a significant contributor to climate change. Trees play a crucial role in carbon sequestration, helping to mitigate greenhouse gas emissions. However, widespread deforestation disrupts this balance, releasing vast amounts of carbon dioxide into the atmosphere. Additionally, land degradation

caused by unsustainable farming practices further diminishes the land's ability to produce food, compounding food insecurity.

### **3. Agriculture's Carbon Footprint**

Conventional agricultural practices, particularly intensive livestock farming and excessive use of chemical fertilizers, emit substantial greenhouse gases. The agricultural sector accounts for a significant portion of global emissions, exacerbating climate change. Shifting towards sustainable agricultural practices, such as agroforestry, organic farming, and regenerative agriculture, not only reduces the carbon footprint but also fosters greater food security.

### **4. Water Scarcity and Food Production**

Climate change disrupts water cycles, leading to altered precipitation patterns and increasing water scarcity in many regions. Water is a critical resource for agriculture, and its scarcity directly impacts food production. Sustainable water management practices and efficient irrigation systems are vital to ensure food security amidst changing climatic conditions.

### **5. Food Waste and Emissions**

The issue of food waste further exacerbates the climate-food insecurity nexus. A significant portion of food produced globally is lost or wasted at various stages of the supply chain, emitting greenhouse gases in the process. Addressing food waste through improved storage, distribution, and consumption practices not only enhances food security but also reduces emissions.

### **6. Sustainable Food Systems: A Solution for Both Hunger and Climate Change**

While the interconnection between hunger and climate change presents complex challenges, it also holds promise for transformative solutions. Sustainable food systems lie at the heart of addressing both crises simultaneously. By adopting regenerative and climate-smart agricultural practices, we can enhance food security while promoting carbon sequestration and reducing emissions.

The nexus between hunger, climate change, and environmental issues is undeniable, demanding urgent action and collaborative solutions. Addressing food insecurity becomes a pivotal entry point in mitigating climate change and fostering environmental sustainability. Through sustainable farming practices, conservation of biodiversity, reduced food waste, and equitable access to resources, we can nourish both the planet and its people.

In striving for a future where hunger is eradicated and the earth restored, we embark on a shared journey—a journey of resilience, innovation, and solidarity. By recognizing the interdependence of these challenges, we forge a path toward a brighter, more sustainable world—a world where communities flourish, the environment thrives, and hunger and climate change are met with the unyielding force of global cooperation and compassion.

## 2. Addressing the SDG

In September 2015, the United Nations adopted a historic and ambitious agenda to tackle the most pressing global challenges. This agenda, known as the Sustainable Development Goals (SDGs), encompasses a comprehensive set of 17 goals and 169 targets aimed at creating a more equitable, sustainable, and prosperous world for all. Among these goals, SDG 2—Zero Hunger—stands as a crucial pillar in addressing the challenge of food security and malnutrition.

### What Are the SDGs?

The Sustainable Development Goals are a universal call to action designed to mobilize governments, businesses, civil society, and individuals worldwide to collectively work towards building a better future. The SDGs cover a wide range of interconnected issues, addressing poverty, hunger, health, education, gender equality, clean water, climate action, and more. They represent an unprecedented global effort to address the root causes of global challenges, leaving no one behind.

### The Importance of SDGs

- **Global Collaboration:** The SDGs bring nations and stakeholders together, fostering international cooperation to address shared challenges. By promoting collaborative efforts, the SDGs facilitate the pooling of knowledge, expertise, and resources to tackle issues that transcend borders, such as climate change and hunger.
- **Integrated Approach:** The SDGs recognize that global challenges are interconnected and require integrated solutions. Addressing hunger, for instance, involves not only ensuring food production but also improving nutrition, promoting sustainable agriculture, and empowering vulnerable communities.
- **Leaving No One Behind:** Central to the SDGs is the principle of inclusivity. By emphasizing the importance of reaching the most marginalized and vulnerable populations, the SDGs seek to uplift those facing poverty, malnutrition, and discrimination.
- **Long-term Vision:** The SDGs provide a long-term vision for sustainable development. Their scope extends to the year 2030, encouraging strategic planning and investment in projects and initiatives that have lasting impacts on food security and other global challenges.

## SDG's Impact on Food Security

### SDG 2: Zero Hunger

SDG 2 is dedicated to eradicating hunger, achieving food security, improving nutrition, and promoting sustainable agriculture. It recognizes that food security is a fundamental human right and a critical component of sustainable development.

- **Promoting Sustainable Agriculture:** SDG 2 emphasizes the need for sustainable farming practices that safeguard ecosystems, conserve natural resources, and support the livelihoods of small-scale farmers. By investing in sustainable agriculture, we foster long-term food security and resilience.
- **Nutrition and Health:** The goal goes beyond ensuring adequate caloric intake and focuses on nutrition and health. Improving nutrition, especially for vulnerable groups such as children and pregnant women, is essential in breaking the cycle of malnutrition and improving health outcomes.
- **Empowering Smallholder Farmers:** SDG 2 aims to empower smallholder farmers, particularly women, who play a critical role in global food production. By providing them with access to resources, knowledge, and technology, we can enhance productivity and ensure food security.
- **Resilience to Climate Change:** The SDGs recognize the impact of climate change on food security and aim to build resilience in agricultural systems. By adopting climate-smart practices and investing in climate-resilient infrastructure, we safeguard food production in the face of changing environmental conditions.

The Sustainable Development Goals represent a transformative global vision for a sustainable and inclusive future. SDG 2, Zero Hunger, stands as a testament to the importance of addressing food security, malnutrition, and sustainable agriculture as essential components of this vision. By embracing the SDGs and committing to their realization, we pave the way for a world where hunger is eradicated, food security is ensured for all, and the fundamental dignity of every individual is upheld.



## 3. Our solution

### 3.1 Addressing the Difficulties of the Root of Food Insecurity

The first goal of the Impact Cardinals is to prevent endemic hunger by implementing urban farms in West Africa. By making promoting the development of small urban farms in Africa, we can:

- 1) End endemic hunger by fighting against food waste and bad food repartition
- 2) Address the devastating effect of the agricultural system on climate
- 3) Address inequalities in the agriculture supply chain system, and allows our farmers to have better remuneration for their work.

Addressing the food security difficulties is answering some of our time's most urgent issues. To this end, we are developing the Basic Nutrition Token, a stablecoin to make an IMPACT.

### 3.2 What is a stablecoin?

Stablecoins are a type of cryptocurrency designed to maintain a stable value relative to a reference asset, typically a fiat currency like the US Dollar (USD) or a commodity like gold. They are called "stable" because their value is intended to remain relatively constant over time, unlike many other cryptocurrencies, such as Bitcoin or Ethereum, which can experience significant price volatility. Therefore, even if the volatility of certain cryptocurrencies can be a good thing, it can also be highly risky.

There are several types of stablecoins, and they achieve price stability through various mechanisms:

- **Fiat-Collateralized Stablecoins:** These stablecoins are backed by reserves of fiat currency (e.g., USD, EUR) held in a bank account. Each stablecoin in circulation is supposed to be backed by an equivalent amount of fiat currency. Examples include Tether (USDT), USD Coin (USDC), and TrueUSD (TUSD).
- **Crypto-Collateralized Stablecoins:** These stablecoins are backed by a basket of other cryptocurrencies. To maintain stability, these platforms often use over-collateralization, where the value of the underlying crypto assets is higher than the value of the issued stablecoins. Dai, which is part of the MakerDAO ecosystem and backed by Ethereum (ETH), is a well-known example of this type.
- **Algorithmic Stablecoins:** These stablecoins use algorithms and smart contracts to manage their supply and demand dynamically. They do not rely on collateral but instead employ mechanisms like seigniorage shares to expand or contract the supply to maintain price stability. Ampleforth (AMPL) is an example of an algorithmic stablecoin.

Stablecoins have several use cases, including :

- **Trading and Speculation:** Traders often use stablecoins as a safe haven to park their funds during periods of high cryptocurrency price volatility. They can quickly convert volatile cryptocurrencies into stablecoins to preserve their value.
- **Remittances:** Stablecoins can be used for cross-border money transfers with lower fees and faster settlement times compared to traditional banking systems.
- **Decentralized Finance (DeFi):** Stablecoins are a fundamental building block in DeFi applications. They serve as a stable medium of exchange, a unit of account, and a store of value within DeFi protocols for lending, borrowing, yield farming, and liquidity provision.
- **Hedging:** Individuals and businesses can use stablecoins to hedge against cryptocurrency market volatility. For example, a merchant may accept payment in stablecoins to avoid price fluctuations before converting them to their local currency.
- **Access to Cryptocurrency Markets:** Some people use stablecoins as an on-ramp to enter the cryptocurrency market. They purchase stablecoins with fiat currency and then trade them for other cryptocurrencies.
- **Store of Value:** In regions with hyperinflation or unstable fiat currencies, stablecoins can provide a more stable store of value for individuals and businesses.

### 3.2.1 Use case of stablecoin

Stablecoin, in the crypto world, serves mostly as a medium of exchange because of its stability and as a store of value. Therefore, many people buy stablecoin with regular cryptocurrencies such as bitcoin to get back their money easier and faster. When the market is tumbling, stablecoin gives traders temporary reprieve from volatility. They can thus buy stablecoin and exchange it with fiat currencies, such as dollars, euros etc, more quickly

## 3.3 Why using stablecoins?

### 3.3.1 The Promise of Blockchain Technology

We are aware that the cryptocurrency world can seem quite unstable and inspire a lack of trust for a lot of people, especially when a cryptocurrency project pretends to exist in a philanthropic way. However, today, despite its common use, the blockchain technology on which cryptocurrencies rely can present a huge opportunity for the world to rethink philanthropy and the way we connect. Blockchain technology could allow transparency to build a global system that goes beyond borders and reunites people around common incentives. With transparency, we are committed to reuniting this global community and transforming the global food system.

### 3.3.2 Addressing the Fears of Cryptocurrencies

#### **1. Taming Volatility for Consistent Impact:**

Traditional cryptocurrencies are notorious for their price volatility, which can greatly affect the value of donations. Stablecoins, on the other hand, are pegged to stable assets such as fiat currencies or commodities. This pegging ensures that the value of the stablecoin remains steady, allowing donors to contribute without the fear of their donations losing significant value over time. This stability empowers donors to commit to long-term giving strategies that can have a lasting impact.

#### **2. Building Trust through Transparency:**

Trust is the cornerstone of any philanthropic endeavor. Stablecoins, built on blockchain technology, provide an immutable and transparent ledger of all transactions. This transparency enables donors to track their contributions from inception to impact, creating a sense of accountability and trust between donors and recipients. The ability to trace funds and verify their allocation fosters confidence in the philanthropic process. The second fear people can feel towards cryptocurrency is people's intentions behind the projects and their commitments to their projects.

As a non-profit organization that aims to register as such officially, we will be legally forced to give our profits towards a cause and not be able to take any amount of money from people's investments. With a reserve with 100% backing, we ensure that our stablecoin is resilient to speculative attacks.

As a non-profit, we are committed to transparency. Therefore, all the different projects financed by the Basic Nutrition Token and their impact will be visible on our website. People who invest in the BNT can follow how each amount of the BNT has been spent and where the money is going. Our platform will allow individuals to buy or redeem the Basic Nutrition token. Our reserve will be composed of cash and highly liquid treasuries to ensure that users can redeem their Basic Nutrition Token for real fiat currencies anytime.

#### **3. Facilitating Cross-Border Giving:**

Philanthropy knows no borders, but cross-border transactions can be complex and time-consuming due to currency conversions and financial intermediaries. Stablecoins, being digital assets, can be seamlessly transferred across borders with minimal transaction fees and reduced processing times. This simplification of cross-border transactions enhances the speed at which aid reaches recipients in need, making philanthropy more agile and responsive.

#### **4. Empowering Donors with Financial Inclusion:**

Stablecoins hold the potential to promote financial inclusion among donors who may not have easy access to traditional banking services. Anyone with a smartphone and internet

connection can participate in stablecoin-driven philanthropy, democratizing the act of giving and broadening the donor base.

### **5. Scaling Impact through Collaboration:**

Stablecoins can transcend individual initiatives and be adopted by multiple stakeholders – individuals, corporations, nonprofits, and governments – to collectively address global challenges. This collaborative approach can amplify the impact of philanthropic efforts, channeling resources more efficiently toward solving pressing issues like hunger, education, and healthcare.

In a world where technology is rapidly reshaping sectors, stablecoins offer philanthropy a chance to transform its operational landscape. Their stability, transparency, accessibility, and potential for collaboration hold the promise of a future where philanthropy's impact is maximized, inefficiencies are minimized, and positive change is accelerated.

## **3.4 How does the Basic Nutrition Token work?**

The Basic Nutrition Token project aims to create a new way to finance projects to prevent food insecurity.

### **A Stable Foundation: Value Pegged to the Dollar**

The BNT's foundational principle lies in its value pegged to the dollar. For every investment made, an equivalent number of BNT tokens are granted. This ensures a direct correspondence between the investment amount and the number of tokens received, underpinning the BNT's value stability.

### **Secure Storage and Assurance**

The acquired BNT tokens are securely stored within a blockchain-backed crypto wallet. Importantly, each circulating BNT is fortified by an equivalent sum of dollars held in reserve by the Impact Cardinals Organization. This distinctive approach nullifies the volatility risks associated with cryptocurrencies, offering investors assurance in the token's value.

### **Strategic Investment and Growth**

The BNT's journey ventures beyond mere acquisition. The invested amount is directed towards 3-month T-bills, a form of secure US government bonds. This strategic investment yields a consistent interest rate, averaging around 2.7% annually. Thus, the initial investment not only retains its value but grows over time.

### **Empowering Impact and Transformation**

The BNT's core purpose goes beyond financial growth. The interest accrued from the T-bill investment reverts to the Impact Cardinals Organization, forming a pool of resources for initiatives aimed at revolutionizing agricultural supply chains. The result is a dual impact – financial empowerment and a tangible contribution to sustainable transformation.

## **Flexibility and Potential**

What sets the BNT apart is its flexibility. Following the initial 3-month investment period, funds can be withdrawn at any time. However, by allowing investments to remain converted into BNT over a longer period, the potential for compounded growth increases. This flexibility aligns with the BNT's overarching objective – not only to foster impactful change but also to empower financial growth.

## **3.5 How does the BNT generate money?**

The Basic Nutrition Token (BNT) embodies a comprehensive approach to philanthropy, intertwining blockchain technology, stablecoins, and strategic investment to realize sustainable impact. The journey from initial investment to tangible change follows a meticulous process that underlines the BNT's effectiveness in combating hunger and driving agricultural sustainability.

### **Step 1: The Investment**

When an individual chooses to invest in the Basic Nutrition Token, they commit a specific amount, and in return, they receive an equivalent number of BNT tokens. This correspondence between investment and token allocation establishes the value pegged to the dollar. For instance, a \$100 investment yields 100 BNT tokens, securely stored within a blockchain-backed crypto wallet.

### **Step 2: Ensuring Value Stability**

What sets the BNT apart is the financial assurance it offers to investors. For every BNT in circulation, Impact Cardinals maintains an equivalent sum of dollars in reserve. This signifies that every token's value is safeguarded by an existing dollar, effectively mitigating the volatility concerns that often surround cryptocurrency investments.

### **Step 3: Strategic Investment for Growth**

The allocated investment, represented in BNT, undergoes a strategic deployment. It finds its place in 3-month T-bills, a low-risk form of US government bonds. This financial maneuver ensures that the investment continues to grow, driven by an average annual interest rate of approximately 2.7%. This process transforms the initial contribution into a consistent source of financial strength.

### **Step 4: Fostering Sustainable Impact**

The interest generated from the T-bill investment circles back to the IMPACT Organization. This accrued interest serves as a financial resource to fund initiatives aimed at financing urban farm projects. By channeling these resources into impactful projects, the BNT reinforces its commitment to tackling hunger and establishing a more sustainable food ecosystem.

### **Step 5: A Future of Inclusion and Transformation**

The beauty of the BNT lies in its ability to blend innovative technology with tangible action. This holistic model welcomes diverse actors, from individuals to corporations, governments to nonprofits. Its inclusive nature amplifies impact, as BNT's adoption facilitates collaborations that transcend traditional boundaries and foster global change.

### **Flexibility and Sustainable Growth: The Catalysts**

A unique feature of the BNT is its flexibility. After the initial 3-month investment period, individuals can withdraw their funds at any time and have their money back. However, it's important to note that the longer the investment remains converted into BNT, the greater the potential for compounded growth. This aspect aligns with the BNT's overarching mission – to foster not only sustainable impact but also financial empowerment.

### **Conclusion: An Evolution in Philanthropy**

The Basic Nutrition Token represents more than a novel approach to philanthropy – it signifies a paradigm shift. With its strategic investment structure, value stability, and commitment to impactful projects, the BNT unifies technology, finance, and purpose to create lasting change.

Using blockchain technology to improve the fight against hunger and climate change can allow the adapting a new philanthropic model to scale up the social and environmental fight. This model allows anyone to participate in a social fight without losing money.

Our goal is that the Basic Nutrition Token become a mainstream currency and extend its use. Therefore, if different actors and not only those in the crypto world decide to adopt the Basic Nutrition Token, holdings of the BNT will automatically help people to have better food access and will contribute to making the global food system more sustainable and respectful of the environment.

## **4. Implementation**

The implementation of the Basic Nutrition Token (BNT) involves several key steps. The following outlines the process and actions taken to make the BNT a reality:

**1. Creating the BNT:** The first step is to develop and launch the Basic Nutrition Token. This involves leveraging blockchain technology to create a stablecoin that is pegged to the value of the US dollar. The stablecoin provides stability and trust to users, mitigating the volatility often associated with cryptocurrencies.

**2. Establishing the Reserve:** The BNT requires a reserve to back the stablecoin's value. When individuals invest in the BNT by purchasing the token, the equivalent amount in dollars is collected and kept in reserve. This reserve ensures that each BNT in circulation has the corresponding value in real fiat currency.

**3. Investing the Reserve:** The funds collected in reserve are invested in low-risk and highly liquid assets such as 3-month T-bills, which are US government bonds. This investment generates interest, providing a source of income for the Impact Organization.

**4. Financing Impact Projects:** The interest earned from the reserve investments is used to finance impact projects aimed at transforming the agricultural supply chain system. These projects focus on addressing the difficulties faced by farmers, reducing food waste, improving food management, promoting sustainability, and supporting innovative initiatives.

**5. Transparency and Accountability:** The Impact Organization is committed to transparency. Through a dedicated platform, individuals who invest in the BNT can track how their investment is being used and follow the progress of impact projects. All financial transactions and project expenditures are made visible, ensuring accountability and building trust among stakeholders.

**6. Adoption and Scaling:** The ultimate goal is to make the BNT a mainstream currency that extends beyond the crypto world. By encouraging different actors, including consumers, farmers, and supply chain participants, to adopt the BNT, its holdings increase, leading to a greater impact. As more people use the BNT, the agricultural system becomes more sustainable, and access to nutritious food improves while supporting the well-being of farmers and their communities.

**7. Philanthropic Model Transformation:** Implementing the BNT represents a new philanthropic model. It allows individuals to participate in social and environmental initiatives without financial loss, as their investments are backed by the reserve and contribute to positive change. The use of blockchain technology enables global connectivity, transparency, and scalability in philanthropic efforts.

By following this implementation plan, the Basic Nutrition Token aims to disrupt the agricultural sector, address inequalities in the supply chain, combat hunger, and promote a more sustainable food system. It provides a means for individuals to contribute to these causes while ensuring stability, transparency, and impact in the process.

## 5. Impactful projects

The aim of the Basic Nutrition Token is to leverage blockchain to generate money in order to finance different programs and missions to tackle food insecurity in Africa.

### 5.1 Sustainable ecosystem

Impact Cardinals will focus on 3 main areas to end hunger :

#### **Farming:**

- a. training of farmers
- b. Expanding the use of climate-resilient crops
- c. Improving livestock feed
- d. Developing urban farming

#### **Development and infrastructure:**

- e. Irrigation
- f. Post-Harvest Loss Reduction
- g. Adapt all food systems to eliminate loss or waste of food
- h. Develop transport and other infrastructures
- i. Reducing food waste: 30% of all the food produced in the world is thrown away

#### **Social empowerment:**

- j. Developing farmer's organizations
- k. Income support
- l. Developing youth training in farming
- m. Promote education

### 5.2 Urban Farming as a First Step to Prevent Hunger

The first project of the Impact Cardinals will be to use urban farming as a vector for social, economic and environmental change.

#### 5.2.1 Urban Farming

Urban farms today have the dual potential to address food insecurity and climate change.



Today, cities occupy 3% of the Earth, and they are estimated to account for 75% of the world's energy consumption and global carbon emissions.

By the year 2050, the global population is expected to stand at 9-10 billion people, with approximately 68% of that living in urban centers, increasing food production needs by 70%-100%. Food demand is a major driver of biodiversity loss, and industrial agriculture accounts for approximately one-quarter of all greenhouse gas emissions, which highlights the need to shift food production towards more sustainable and responsible practices. Urban Agriculture is a viable method of growing food in the city with many social, economic, and environmental benefits. UA allows the move of food production towards a low-carbon economy because of its proximity to consumers, decreasing the need for long supply chains transports

Urban strategy to enhance climate change resilience through the provision of urban green space and as a complementary strategy to improve urban environmental management by productively reusing Ryan waste in the circular economy.

Creating mechanisms to improve urban food security will lead to building system resilience while also improving food sovereignty. It will result in:

- Creating employment

- Urban strategy to enhance climate change resilience through the provision of urban green space and as a complementary strategy to improve urban environmental management by productively reusing Ryan waste in the circular economy.

### 5.2.2 Sustainability and urban farming

Sustainable development can be understood as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. With this understanding of sustainable development, the United Nations (UN) recommended that the world adopt a collection of 17 Sustainable development Goals. The SDGs seek to shift governmental approaches to développement based on the philosophy that for communities and businesses to flourish, all three pillars of sustainability (economy, society, and environment) need to be integrated into national growth strategies.

Food systems can be understood as a set of activities ranging from production to consumption and are influenced by political, cultural, social, technological, natural, and economic factors.

Today, it is crucial to understand the interaction between the food system and other key systems and to advocate for sustainable agriculture as a responsible solution to food insecurity.

Food security was defined at the World Food Summit as «when all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. »

Therefore, producing more food is not the solution for food security. Food supply chains have become increasingly complex, resulting in more intermediaries and increased risk of losses.

Food security challenges in developing countries are not only a result of insufficient production but are also linked to argue that food insecurity in Africa is linked to access challenges rather than production challenges.

### 5.2.3 Introducing sustainability into food systems

A functioning food system is defined by Erickson as one that delivers a high level of food security to local communities and simultaneously considers environmental, social, and economic development and intergenerational needs.

According to the FAO (2018), to achieve the SGGs, food systems will need to be more productive, more inclusive, more environmentally sustainable, and more resilient. Growing food within cities, closer to consumers by means of UA, decreases the need for storage, refrigeration and transport, thereby mitigating the challenges and externalities associated with intensive agriculture and long supply chains, as discussed in the section above.

#### **\*\*Resilience theory\*\***

Resilience systems are said to have the 'adaptive capacity' to absorb shocks, and when changes do occur, resilience can deliver mechanisms for renewal and reorganisation. Resilience is what allows re-configuration during times of crisis and vulnerability. Change in a resilient system potentially creates development opportunities, whereas changes in a vulnerable system will likely be overwhelming, even if relatively small. Cities and urban systems are social-ecological systems due to their nested environmental interaction. In terms of building resilient food systems argued that **\*\*the vulnerability of food systems is made worse by long supply chains.**

Urban Agriculture can eliminate the dependence on long supply chains and increase the diversity of urban food sources, leading to more resilient food systems and communities.

## 5.3 iMPACT farms

### **The principle:**

To address food insecurity in Africa, the Impact Cardinals aims to create different urban farms in Africa. The organization's first mission will be to finance the development of small off-ground farms.

Urban agriculture is an industry located within or on the fringe of a town, a city, or a metropolis that grows or raises, processes, and distributes a diversity of food and non-food products.

Urban agriculture can be seen to complement rural and industrial agriculture, which results in a stronger national food system. Urban farming has a social, ecological, and economic impact:

### **Social impacts**

Urban agriculture can deepen social développement and community cohesion through the creation of shared learning experiences. Studies found that UA strengthens social capital and interpersonal relationships within communities. Furthermore, children who participated in community gardening tended to eat more vegetables.

### **Ecological impacts**

Storage, refrigeration, and transport accounted for 40% of food loss and waste in 2011, with more loss in developing countries than in developed countries. Growing food in cities presents an opportunity to reduce food miles and the associated energy requirements of long supply chains.

Urban agriculture increases the provision of urban green spaces. Green roofs is good for sustainable management of stormwater runoff and may reduce the costs of developing new infrastructures and stimulate infill développement or the redevelopment of vacant urban areas in the city center, show that experiences with nature are likely to increase a child's willingness to conserve it.

### **Economic impact**

UA as a potential of income generator. Buying food locally boosts the local economy. In Kenya, the economic benefits of UA have largely been realized through improved food security and selling surplus produce, which potentially frees up funds to be used elsewhere.

Urban agriculture can help to improve the food security of the local population and can also provide people with a primary or supplemental income. Income from urban agriculture is particularly high in many African cities. Furthermore, urban agriculture allows to solve

transportation problems by growing food closer and therefore impacts the environment by reducing transport from rural areas to urban areas.

In addition, the iMPACT farms will create a sustainable ecosystem and implement sustainable practices to grow food. The organization will provide services required for smallholder farmers with training education, harvesting and marketing support, financial micro-credits, and agricultural inputs.

The iMPACT Farms have several benefits:

- Increase food security
- Increase income
- Provide local population and especially the youth with jobs and incomes
- Allows the economic and social development in the long-term of population

## 5.4 The functioning of urban farms

Our approach is to build small urban farms in cities affected by poverty and food insecurity issues in Africa. We will provide young unemployed people with :

1. Training and education in sustainable methods of farming
2. Financial support
3. Workspace

The agricultural products from the production made by the organization's farms, will be distributed for free to the local population. Therefore, the money invested in the Basic Nutrition Token will:

- Provide young unemployed people with job and salaries
- Finance sustainable urban farms

In order to:

- Prevent food insecurity: distribute food to the local population
- Cultivate sustainable agricultural products
- Limits the effects of the pollution generated by regular farms
- Provide local population with quality food
- The people we will form will dispose of different skills of of-ground farming
- Important quantity of agricultural products are available in a sustainable way to be distributed to people in need
-

Today, off-ground agriculture is the best way to achieve urban agriculture in Africa. This practice has several advantages:

- Intense agriculture with high production at harvest.
- Better yields
- Fewer pest attacks on the soil
- Better control of the precocity
- Less water consumption
- Controlled and fast growth

In East Africa, the coconut fiber is the best support for off-ground agriculture because of its local manufacture and relatively accessible cost. Moreover, it is an organic, natural and 100% biodegradable product.

To develop this first mission of the Organization, we will closely collaborate with different actors already established in this region in order to develop a strong program with real benefits.

Each individual who invests in the Basic Nutrition Token will have the possibility to trace the impact of the investment made and see in real-time on our website what the money is used for and its impact on the ground.

### **Measuring our impact:**

At the heart of our endeavor lies a cost-effective and scalable approach. For each 1000 BNT invested in US bonds, generating the targeted 3% interest, we can mobilize approximately 30 dollars to build one small urban farm covering an area of 100 square meters in Kenya. This efficient allocation of resources ensures that every BNT contributes significantly to our cause, enabling the construction of a farm capable of sustaining five individuals daily.

The urban farms we aim to establish are designed to produce a diverse array of nutrient-rich vegetables and locally sourced chicken, carefully cultivated to provide between 2,000 and 2,500 calories per person each day. It is through this measured impact and tangible outcomes that we aim to break the cycle of hunger, empowering communities to become self-sufficient and resilient.

To measure our success, we will closely collaborate with local partners and experts, diligently refining our urban farming model in Kenya during the pilot phase. By continuously testing and improving our strategies, we will ensure the scalability and long-term sustainability of our approach.

Let's delve into the details of how building urban farms of 100 square meters can be an effective and efficient way to produce enough food to ensure between 2000 and 2500 calories per day for 5 people.

**Optimized Farming Techniques:** Our urban farming project employs advanced agricultural practices, maximizing the use of limited space within 100 square meters. Utilizing vertical farming techniques, hydroponics, and precision agriculture, we can cultivate a wide variety of nutrient-rich vegetables and herbs in vertically stacked layers. This approach not only conserves space but also optimizes resource usage, resulting in bountiful yields.

**Crop Selection for Optimal Nutrition:** The selection of crops is meticulously curated to provide a balanced and nutritious diet. We focus on cultivating high-calorie and protein-rich crops, such as tomatoes, peppers, cucumbers, and leafy greens. Complementing these vegetables, we raise locally sourced chickens in a sustainable and humane manner, producing fresh eggs and lean meat for added protein intake.

**Sustainable and Integrated Farming:** Our farms prioritize sustainability and self-sufficiency. We incorporate integrated farming practices, such as using chicken manure as organic fertilizer for the crops, promoting nutrient recycling and reducing waste. Additionally, rainwater harvesting systems and solar-powered irrigation ensure resource efficiency and environmental responsibility.

**Crop Rotation and Succession Planting:** To maintain optimal soil health and prevent depletion, we implement crop rotation and succession planting techniques. By rotating crops and planting different varieties seasonally, we enhance soil fertility and minimize the risk of pests and diseases, ensuring consistent yields throughout the year.

**Local Community Involvement:** Our urban farms are deeply integrated into the local communities they serve. We engage community members in every step of the farming process, from planning and cultivation to harvesting and distribution. Through training and capacity-building initiatives, we empower community members with the knowledge and skills needed to maintain and expand the farms independently.

**Measuring Impact:** We closely monitor and evaluate the output of each farm, tracking crop yields, nutritional content, and the overall health of the communities we serve. By regularly assessing our impact, we continuously improve our farming methods and ensure that our farms consistently meet the goal of providing between 2000 and 2500 calories per day to five individuals.

**Scaling the Model:** As the pilot project in Kenya yields positive results, we are committed to scaling our urban farming model to address food insecurity in other regions and communities. By sharing best practices and lessons learned, we aspire to replicate the success of our initial endeavor and extend the reach of our initiative to uplift more lives.

| Price to build on urban farm | BNT amount needed | Size of the farm (in square meters) | Types of cultures   | Amount of calories daily per person | Number of people who can daily be fed |
|------------------------------|-------------------|-------------------------------------|---------------------|-------------------------------------|---------------------------------------|
| 30 dollars                   | 1,000             | 100                                 | Vegetables, poultry | Between 2000 and 2500               | Between 4 and 5                       |

## 6. Market growth

### 6.1 Use case

#### For stablecoin users:

Stablecoin is used in the crypto world as digital assets to convert the regular cryptocurrencies they bought into fiat devices such as the dollars quicker. The global stablecoin market is worth 150 billion.

Using stablecoin in the crypto world can present many advantages. Most of the time, users are searching for:

- **Reduced Volatility Risk:** Cryptocurrencies like Bitcoin and Ethereum are known for their price volatility. Their values can fluctuate significantly in a short period of time. Traders and investors often use stablecoins as a temporary safe haven during times of high volatility. By converting their holdings into stablecoins, they can protect the value of their assets and reduce exposure to price swings.
- **Quick and Efficient Trading:** Stablecoins provide a convenient means to move funds within the cryptocurrency ecosystem quickly. When trading between different cryptocurrencies, stablecoins offer a stable intermediary, allowing traders to avoid the delays and costs associated with transferring fiat currency in and out of exchanges. This makes arbitrage and trading strategies more efficient.
- **Lack of Access to Traditional Banking:** Some cryptocurrency exchanges and users may have limited access to traditional banking services or face difficulties with fiat currency transactions. Stablecoins can act as a bridge between the cryptocurrency world and the traditional financial system, allowing users to easily transfer value in and out of the crypto ecosystem.
- **24/7 Markets:** The cryptocurrency market operates 24/7, which means that fiat currency transfers can be challenging during weekends or non-business hours. Stablecoins provide a way to continue trading and transacting without being restricted by the operating hours of banks or financial institutions.

- **Privacy and Anonymity:** While stablecoins are not entirely anonymous, they can provide a level of privacy compared to traditional banking transactions. Users who value privacy may choose to use stablecoins for their transactions instead of fiat currency.
- **Access to DeFi Services:** Stablecoins are a fundamental component of decentralized finance (DeFi) platforms. Users provide liquidity to DeFi protocols and earn yields by lending stablecoins. They also use stablecoins as collateral to borrow other cryptocurrencies. Stablecoins' stability and ease of use make them a preferred choice for these DeFi activities.
- **Reduced Counterparty Risk:** When users exchange cryptocurrencies, they often need to trust the counterparty to complete the transaction. Stablecoins offer a way to reduce counterparty risk because their values are less likely to change significantly during the transaction process.

People in the crypto world will use the BNT not just for its aims as a social currency. They will use it because the IMPACT Organization will ensure to create the most secure, stable, and well-driven token to achieve its final goal. People will trust the BNT not just because of the promise behind it but because we will make sure to be the most transparent as possible with different actions.

**Buying the Basic Nutrition Token can ensure:**

- 1- To be fully backed by a mix of cash and cash equivalents (3-month US treasury bills). Therefore, users can have the assurance that 1 BNT will always be redeemable for 1 USD
- 2- Our organization will conduct and publish frequent attestations and audits led by third-party firms to mirror the level of trust and transparency.
- 3- Impact Cardinals will work to make the BNT available on increasingly more exchanges, blockchains, and platforms.

As an official and registered non-profit, our aim is not to make the maximum of profit but to build a transparent and a relation of trust with people investing in the Basic Nutrition Token. Therefore, a for-profit stablecoin is driven by profits and often chooses to do risky things with reserves because it can generate more yield and make the business more profitable. Because Impact Cardinals is a non-profit that aims to be financed by independent donors, the operational costs of the Organization are not based on the performance of the BNT.

To reach our goal and end hunger, we need to expand the use of the Basic Nutrition Token. At the beginning, the use of the BNT will be restricted. But we hope to extend its use to make the BNT a real currency.



Today, when your savings are at the bank, the bank invests this money to earn interest on it. However, most of a bank's investment with its clients' money is in fossil fuel or projects causing important environmental damage. Therefore, while letting your money sleep on a bank account and finance such projects, you can convert your money for a limited period of time. The interest generated by your money will be used to finance projects aiming at ending hunger in the world, not as a utopia but as a concrete reality.

### **For payment :**

Our goal, as with other cryptocurrency projects, is to make the Basic Nutrition Token a mainstream payment method. To this end, we need the collaboration of individuals and corporations to switch to the BNT to realize the vision of a World without hunger and more sustainable.

- Different merchants can accept the BNT as a means of payment, with the certainty that those BNT could be converted in real money after so they will not lose any money.
- Online platforms such as Stripe and PayPal could allow payment with the BNT that could then convert after a certain period converts into real money before the merchant receives it.
- People could ask their companies for a part of their whole salary to be paid with the Basic Nutrition Token. If so, this part of their salary converted into the BNT will generate money for the IMPACT project and could be at any time converted into real fiat currencies such as dollars or euro.

Impact Cardinals will be enthusiastic to work with businesses and companies that aim to take part of the project and guide them in the best way to invest in the BNT and the whole process to do it.

What is the interest for businesses and companies to switch to the BNT :

- Social impact : Companies can show their commitment to end hunger in the world and sustainability to their customers, attracting more customers and aligning with these values.
- Achieve their ESG (Environmental, Social, and Governance goals).
- The demand of employees to be paid in BNT : if the BNT becomes a mainstream currency, people who wish to have a positive impact on the world could ask to be paid totally or partially in the BNT, knowing, therefore, that their salary do not only represents their work by beyond that, their IMPACT.

Today, much money is available to tackle issues such as hunger and climate change. However, most of the money is oriented to finance companies and projects destroying the environment, creating diseases, and impacting the health of billions of people in developing countries but not only. The consequences of climate change and the lack of transparency and sustainability of different sectors, including the agricultural supply chain system. This impact goes beyond and affects our food, our water, our air everywhere in the world. If we do not address the inefficiencies of the whole agricultural supply chain system as long as it's environmental and social damage, we will all directly or indirectly be affected or dying.

## 6.2 For regular individuals

Our mission at Impact cardinals is to make the use of the Basic Nutrition Token mainstream and largely used by individuals.

When different merchants accept the BNT as a currency, they can convert this amount into real fiat currency (US dollars). In the near future, we aim to encourage different merchants and brands to keep a part of their money in the BNT.

If a large community of merchants shows their commitment to holding BNT, they can attract more customers. To encourage them to do so, they need an incentive:

Each merchant accepting or holding a part of their money will become a stakeholder at IMPACT and partner with our initiative.

Therefore, we could easily determine how much their holdings in BNT is contributing to ending hunger. It can be done by establishing a score each year that will result in the number of people who benefited from this holding having access to food. Therefore, each merchant could communicate each year how many of their actions help a certain amount of people to have access to food and therefore, to tackle hunger in the world without, and all of this, without losing any money.

Therefore, it could create a real commitment to people to purchase from those merchants since they will be aware that supporting them also contributes to preventing hunger and creating a more sustainable global food system.

The growing adoption of the Basic Nutrition Token will involve :

**At first :** The first to join our movement will be at the core of the success of this movement. The more people will join and show their commitment, the easier it will be to convince businesses and enterprises to invest in the BNT and adopt it. Some brands that align with our values could, in order to attract more customers aligning with those same value, engage themselves to hold a part of their money for a limited amount of time with the Basic Nutrition Token. If they do so, they will not lose money : they can convert their holdings in the Basic

Nutrition Token into real fiat currency when they want it. But when their holding is in the Basic Nutrition Token, it will automatically generate money that will contribute to tackling hunger and creating a more sustainable food system in the world's poorest and most difficult regions.

**Then :** It will become easier for people to invest in the Basic Nutrition Token as those who hold this token will be able in some enterprises and with some merchants to exchange this currency for a product or a service. It will make the adoption of the BNT more easier for people. The more people will keep a part of their money in BNT, the more money will be generated. Therefore, if they can use their BNT to buy some articles or services, they will automatically keep their money in the BNT, contributing to our mission.

## 7. Inspire a global citizen movement

As an organization that aspires to bring different actors worldwide, Impact Cardinals aims to be more than a regular non-profit organization.

Anyone believing in our mission can join the journey by buying a Basic Nutrition Token. Once one converts at least 1 dollar in BNT, this action can be considered as buying stock in our non-profit even if you will have your money back, considering that the money an individual will invest will be used to generate money.

Each individual or entity buying stocks at IMPACT will therefore become an associate/stakeholder of our organization and, therefore, of this global movement. Because IMPACT is non-profit, the return on investment will not be in the form of money but in the form of a score each year, which will be calculated depending on the amount of BNT you invested. This score will result in the number of a calculation based on the donors' amount of money that will calculate the impact of their money in reducing food insecurity.

The more stakeholders we will have, the bigger IMPACT we could have and transform the whole agricultural system to benefit farmers and customers worldwide.

### 7.1 Become a stakeholder as an individual

Each individual around the World who believes in our project could become an associate of Impact Cardinals by buying a stock of the Organization in investing in the Basic Nutrition Token.

Once you buy an amount of the Basic Nutrition Token, you can consider that you bought actions of our movement with the certainty of having your money back after your investment. This is a new way to rethink philanthropy. Your investment in IMPACT is an investment in our vision.

To ensure maximum transparency, each stakeholder will have complete access to the work of our organization. Through a specific account, he will be able to follow the development of each project the Foundation is funding and see the impact of each dollar spent in real-time.

#### **Build a community:**

- Each stakeholder will have access to a private Discord group of the Impact Cardinals Organization as if they were part of the team to be the closest of our daily advancement of the Organization and ensure maximum transparency on everything we do.
- Stakeholders will also have the possibility to participate in a general assembly of the Organization that will take place on time per month

## 7.2 Become a stakeholder as a company

Companies and businesses can support this movement in several ways, as it has been described above. Companies can show their commitment to different social and environmental issues by being committed to our purpose. They can show their employees and customers that, as businesses, they are entitled to an IMPACT that goes beyond their day-to-day work with a simple process that will cost them no money and bring them more customers.

All the companies that join us in this journey will be outlined on our website in a kind of 'Hall of Fame' of worldwide entities supporting the fight for food security, climate change, and a sustainable worldwide supply chain system.

Being committed to our vision for companies is being committed to a new way of thinking about the enterprise world. Employees will know that they are coming to do more than just work for a simple company but also to help address some of the biggest issues of our time.

Our target companies are those committed to having a social or environmental impact and that sell products or propose services that align with those values or those not in this area but still want to support the project.

The token technology allows people with common incentives to reunite around what they believe in a creates value ex-nihilo. If today, the bitcoin is worth tens of thousands of dollars, it's because people believe in the value, the assets the bitcoin represents. So if we find a way to reunite people around our vision, we can generate an important value to inspire and take action from this. Therefore, if the BNT becomes a wide use currency, the value from this mainstream use will automatically tackle hunger and climate change by transforming the agricultural supply chain system.

We do not want people to join us only to tackle worldwide chronic hunger. More than that, we want people to join us because they want to be part of this ecosystem as a testimony of **that gathering people globally who believe in the same things can generate a tremendous amount of value that will allow us to tackle issues that could seem impossible to solve before.**

## 8. Distribution

The distribution of the Basic Nutrition Token (BNT) involves making the stablecoin accessible to various stakeholders, including investors, consumers, farmers, and participants in the agricultural supply chain system. The following outlines the key aspects of the distribution process:

**1. Investor Participation:** The BNT distribution begins by offering individuals the opportunity to invest in the stablecoin. Investors can purchase BNT tokens by exchanging fiat currency, such as US dollars or other cryptocurrencies. The investment provides individuals with a stake in the BNT ecosystem and allows them to contribute to the mission of transforming the agricultural supply chain system.

**2. Exchange Listings:** To enhance the accessibility and liquidity of the BNT, efforts are made to list the stablecoin on reputable cryptocurrency exchanges. By being listed on exchanges, the BNT becomes tradable against other cryptocurrencies and fiat currencies, enabling investors to buy, sell, and trade the stablecoin more easily.

**3. Integration with Payment Systems:** The BNT can be integrated with existing payment systems to facilitate its use as a medium of exchange. Collaborations with payment processors, financial institutions, and e-commerce platforms can enable users to transact using the BNT for purchasing goods and services related to the agricultural sector. This integration increases the utility and adoption of the stablecoin.

**4. Consumer Awareness and Adoption:** Consumer awareness and adoption are key to the success of the BNT. Marketing and awareness campaigns are conducted to educate consumers about the benefits of using the BNT for purchasing products. Emphasis is placed on promoting the transparency, traceability, and fair compensation aspects of the BNT, aligning with the growing demand for sustainable and ethically sourced food.

**5. Integration with Digital Wallets:** To facilitate the storage and use of the BNT, integration with digital wallets is pursued. Users can store their BNT tokens securely in digital wallets and easily make transactions using their wallets' functionalities. The integration with popular digital wallet providers enhances convenience and accessibility for users.

**6. Global Expansion:** As the distribution of the BNT gains traction and adoption, efforts are made to expand its reach globally. Collaborations with international organizations, governments, and NGOs are pursued to promote the BNT's use in addressing hunger, poverty, and environmental challenges on a global scale. Expansion strategies focus on regions with high agricultural dependence and where the impact on smallholder farmers can be significant.

Through a comprehensive distribution strategy, the Basic Nutrition Token aims to reach investors, consumers, farmers, and participants in the agricultural supply chain. By fostering accessibility, liquidity, and awareness, the BNT becomes a viable and preferred medium of exchange, contributing to a more sustainable and equitable food system while addressing the challenges faced by farmers and the agricultural sector as a whole.

## 9. Smart contract security and governance

The different aspects discussed above are not yet established but aim to be. The security development is still in process.

Smart contract security and governance are critical aspects of the Basic Nutrition Token (BNT) ecosystem to ensure the integrity, transparency, and trustworthiness of the platform. The following outlines the measures taken to address these important concerns:

**1. Audits and Code Reviews:** Prior to deployment, the BNT smart contract undergoes rigorous security audits and code reviews conducted by reputable blockchain security firms. These audits identify and mitigate vulnerabilities, ensuring that the smart contract is robust and resistant to potential attacks. Regular audits are performed to maintain the security of the BNT ecosystem as it evolves.

**2. Multi-signature Wallets:** To enhance the security of the BNT funds and prevent unauthorized access, multi-signature wallets are implemented. These wallets require multiple authorized parties to sign off on transactions, ensuring that no single individual or entity can unilaterally manipulate the funds or smart contract functions. Multi-signature wallets add an extra layer of security and reduce the risk of funds being compromised.

**3. Bug Bounty Programs:** To incentivize the community to actively participate in identifying and reporting potential vulnerabilities, bug bounty programs are established. These programs reward individuals who discover and disclose security issues or vulnerabilities within the BNT smart contract. By involving the wider community in the security process, the likelihood of

identifying and resolving security vulnerabilities increases, strengthening the overall security of the ecosystem.

**4. Transparent Governance Framework:** The BNT ecosystem will operate under a transparent governance framework that will allow stakeholders to participate in decision-making processes. Through decentralized governance mechanisms such as on-chain voting or staking, token holders can propose and vote on important protocol upgrades, parameter adjustments, or changes to the ecosystem. This transparent governance ensures that decision-making is democratic and reflective of the community's interests.

**5. Emergency Response Plan:** Despite rigorous security measures, unforeseen circumstances or vulnerabilities may arise. To address such situations, an emergency response plan is in place. The plan outlines a systematic approach to handle security incidents, including immediate actions to mitigate risks, communication strategies to inform the community, and remediation measures to resolve the issue promptly. Regular drills and simulations are conducted to test the effectiveness of the emergency response plan.

**6. Continuous Improvement and Upgrades:** Smart contract security is an ongoing process, and the BNT ecosystem is committed to continuous improvement. Regular updates and upgrades to the smart contract are implemented to address emerging security threats, adopt industry best practices, and leverage advancements in blockchain technology. By staying up-to-date with the latest security measures and protocols, the BNT ecosystem ensures the longevity and trustworthiness of the platform.

**7. Collaboration with Security Experts:** The BNT ecosystem actively collaborates with renowned security experts, blockchain researchers, and cybersecurity communities to stay at the forefront of smart contract security. These collaborations help in identifying potential security vulnerabilities, sharing best practices, and benefiting from the collective knowledge of the broader blockchain security community. By leveraging external expertise, the BNT ecosystem enhances its security posture and reduces the risk of security breaches.

Through robust smart contract security practices and a transparent governance framework, the Basic Nutrition Token ecosystem aims to provide a secure and trustworthy platform for participants. By prioritizing security audits, implementing multi-signature wallets, engaging the community through bug bounty programs, and maintaining transparent governance, the BNT ecosystem fosters a secure environment that inspires confidence in stakeholders and promotes the long-term sustainability of the platform.