SOVEREIGN**SKY**

The World's New Operating System
A new, responsible eco-friendly lowest carbon emission blockchain ecosystem

Space-based • Lowest carbon emissions • Eco-friendly
Smart contract enabled • Solar-powered • Fast • Scalable
Design to help end global poverty

SovereignSky.com

Contents

SOVEREIGNSKY

> *"Eradicating extreme global poverty is down to two things: Technology advancement and the 'will' to achieve. With blockchain and SovereignSky we now have the technology and with our team & partners have the will and longterm goal to complete this mission."* - SovereignSky Team

Mission Objectives

🛰 **Become one of the most environmentally green blockchains on and off planet which retail users, developers, companies, contributor and organizations are proud to use.**

🛰 **Provide one of the fastest, most scalable global operating systems and digital financial marketplaces for the blockchain community, which can be powered by solar energy.**

🛰 **To setup a system to really help eradicate extreme global poverty and help protect children & wildlife by 2032. This includes supporting many of the world's orphanages.**

🛰 **A top 20 cryptocurrency in terms of transaction volume, marketcap and smart contract processing with the absolute lowest carbon emissions.**

🛰 **Provide global space-based currencies, stablecoins and a blockchain financial system for big business, Fortune 500 companies and even small nations transacting with each other.**

🛰 **Be the first 'stable' coin' space currency backed by gold and assets from hedge funds, Fortune 500 companies and corporations who can 'Gold Label' Sovereign to create their own currency.**

🛰 **Provide blockchain connectivity to the 3rd world whilst providing a near indestructible, new space-based global financial banking system for generations to come.**

Sovereign Summary

SovereignSky, the Space-based blockchain of the 'Sovereign' eco-system, aspires to be a space-bound eco-friendly, solar-powered blockchain solution to confer equal access to the world's wealth to anyone on earth, regardless of their location, nationality and economic starting conditions. SovereignSky aims to combine a blockchain platform and coins with a low earth orbit satellite network, based upon the government and academia-tested space technology of SovereignSky's partner company SpaceQuest.

This space breaking partnership will future-proof global financial banking systems, transcend infrastructural limits with nodes in international waters, promote low cost and environmentally friendly balloon orbit launches and provide a powerful, smart contract enabled, green blockchain satellite constellation. SovereignSkys's location in the earth's orbit hopes to enable it to offer equal access and equal opportunities to participants from all over the globe. It aspires to become the green, clean and blockchain clean, alternative and incorporate the concepts of "Building block(chain)s for a better planet" introduced by PwC and the Stanford Woods Institute.

Parallel Universe
FOMO Proof
EOS Passport
Portable Tokens
Agile Jurisdictions
PIGS in Space
Raindrop on
BTS & Brownies
Blockchain Community
Defense Trustees

PIGS = Private Internally-Governed Smartcontracts

SovereignSky™

The Search for a better alternative to Bitcoin.

https://news.bitcoin.com/cornell-economist-bitcoin-has-3-flaws-driving-people-to-search-for-better-alternatives (June 19th, 2021)

We, the founding team of SovereignSky, have developed the concept and business model based on our combined, unparalleled expertise in the blockchain market. We strongly believe that existing blockchains and blockchain ecosystems have not yet delivered on the original promise of blockchain:

"Global equality through efficiency and decentralization".

All previous attempts to disrupt the global economy and achieve global equality have suffered from one common problem: they were not able to transcend the very ecosystem they were trying to replace. In other words, helping the world's poorest regions to gain fair access to the global economy and to help achieve equality and efficiency in the distribution of wealth, largely depended on the existing infrastructure in these regions – in particular, energy, monetary resource, and telecommunications – which are largely insufficient to enable the kind of advances that are required to help disadvantaged regions in the 21st century. SovereignSky wishes to step up to finally break this vicious circle: the world's poorest regions will literally be lifted out of their current situation, using the untapped potential of a **satellite-powered, space-based blockchain system**. For a current state of the world economy and system, we recommend watching **"REQUIEM FOR THE AMERICAN DREAM"** with Noam Chomsky, widely regarded as the *most important intellectual alive,* on the defining characteristic of our time - the deliberate concentration of wealth and power and analyzing the phenomenon known as 'income inequality'.

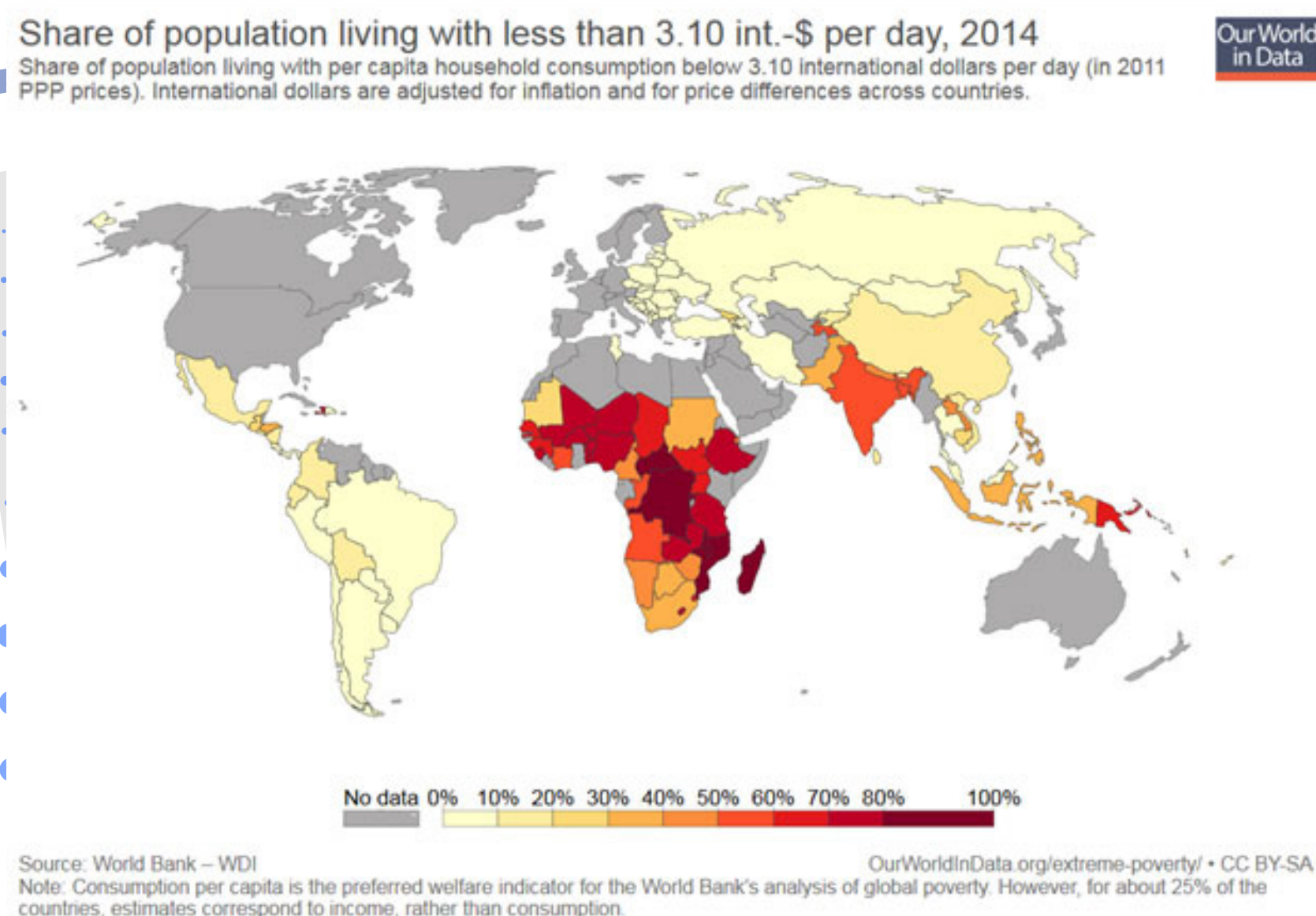https://en.wikipedia.org/wiki/Requiem_for_the_American_Dream

Global Poverty: A Matter of Marketplace Inefficiency

Poverty is defined as a per capita household consumption below $3.10 international dollars per day, and extreme poverty is as low as $1.90 US dollars per day. Extreme poverty still affects about 10% of the worlds population and half of this population lives in Sub-Saharan Africa.

Figure 1: Shows that in Africa and Asia, and to a lesser extent in South America, a sizable proportion of the population are still living in extreme poverty. The causes for this are manifold with unequal access to the global markets being among the most important. Rural areas that are disadvantaged in terms of education and technology, and thus access to national and global markets, suffer from higher poverty levels, in developed as well as in developing countries .
As the **World Bank** says:

"The vast majority of the global population living under the poverty line live in rural areas and have limited to no access to education. Most are employed in the agriculture sector and over half of the population is under the age of 18 years old".

Share of population living with less than 3.10 int.-$ per day, 2014
Share of population living with per capita household consumption below 3.10 international dollars per day (in 2011 PPP prices). International dollars are adjusted for inflation and for price differences across countries.

No data 0% 10% 20% 30% 40% 50% 60% 70% 80%   100%

Source: World Bank – WDI
Note: Consumption per capita is the preferred welfare indicator for the World Bank's analysis of global poverty. However, for about 25% of the countries, estimates correspond to income, rather than consumption.

OurWorldInData.org/extreme-poverty/ • CC BY-SA

We also expect these areas to have very limited financial and Internet connection also, which is SovereignSky primary objective.

However, poverty is not an intractable problem. Since 1990, nearly 1 billion people around the world have moved out of extreme poverty. This was due primarily to the economies of China, India and Indonesia – which all had significant technological progress and aggressively targeted the global markets demanding their share of opportunity.

Therefore, if market participation can be improved in other impoverished countries and weaker economies then it will be possible to move closer towards our goal of abolishing poverty worldwide and this is where SovereignSky's blokchain will connect to and help the 3rd World.

Blockchain and Equal Opportunities: The Need For SovereignSky

Blockchain has originally been conceived as a technology to replace unfair, biased or unreliable centralized financial systems, in favor of freedom, defi, equal opportunities and fair creation and distribution of wealth.

However, current, earth-bound implementations of blockchain and electronic currency have not delivered on this promise so far:

- 🛰 Most user-friendly ways to receive, keep and spend electronic currency and tokens rely on third-party providers – essentially, new central authorities.

- 🛰 In certain countries, authorities maybe able to freeze accounts and funds at any time they choose.

- 🛰 At the same time, these third-party providers are extremely attractive targets of hacking and other cyber attacks, in a way that individual accounts are not.

- 🛰 Although utilizing blockchain is faster than many operations in the fiat currency world, most blockchain operations are not real-time. This is not only an inconvenience, but a tangible risk to the users' funds in time of high volatility.

- 🛰 Finally, and most importantly, any blockchain ecosystem or provider is subject to the laws and regulations in their country of residence or incorporation. Even if a project chooses to move to another country with more crypto-friendly regulations, the team can never be certain that their current government, wherever it maybe, will not decide to crackdown on blockchain and cease their operations.

- 🛰 To help SovereignSky not being included in a crackdown we are aiming to build a blockchain for all, and that includes making it government-friendly to help overcome issues that could create a crackdown on other blockchains. The fact that we are one of the first truly lowest carbon emissions blockchain, super fast and open to work with financial authorities - already makes SovereignSky the perfect blockchain to support.

SovereignSky can process over 50,0000 transactions per second compared to Ethereum at ~30 TPS and Bitcoin at ~4.5 TPS

1. Banking the Unbanked

Please read June 2021 press: SovereignSky - The Green Alternative Article

>> https://steemit.com/bitshares/@stan/beos-on-sovereignsky-the-green-alternative-to-bitcoin-and-ethereum

Due to the reasons cited above, blockchain technology still has not taken its place in reducing world poverty and enabling equal opportunities. Even more than 10 years after the original inception of blockchain technology, there are still over 1.6 billion unbanked individuals in the world, cut off from all global opportunities and wealth creation the rest of us are able to enjoy freely.

What these individuals need, and its our duty to provide as good citizens on this planet, regardless of their location in developing or developed countries, is **"financial inclusion"** – key to reducing poverty by enabling them to create and expand businesses, conducting efficient and transparent transactions and managing savings securely. All which can now be achieved by utilizing RUON.AI technology with SovereignSky connectivity.

A large proportion of the current unbanked – 21% and 12%, respectively – are located in the high-growth economies of Asia and India. Therefore, any venture aimed at improving their economic situation and offering them the chance to start life, manage and grow businesses has a huge growth potential. The potential growth and market value of global blockchains is staggering. Ethereum has a current marketcap of $270 Bln (June, 2021). Some experts feel this will get to $2.8 trillion by 2025. https://news.bitcoin.com/ethereum-price-19842-2025-35-experts

Sovereign is a decentralized, open-source blockchain with smart contract functionality but is much much faster, more scalable and has very min. gas fees compared to Ethereum, We also have plans to run it entirely on solar power therefore being much cleaner also, and totally environmentally friendly - with absolute lowest carbon emissions. On top of all that its operational on the ground today, but will soon become the first space-based blockchain bringing with it all the additional benefits of space such as last ability, transactional agility, and global connectivity for everyone, everywhere in the greenest way possible.

The World's new blockchain operating system -
A Fast, New, Eco-friendly Responsible Blockchain Ecosystem...

At SovereignSky, we are proposing a novel green blockchain to be built upon prior works of one of the founders – EOS and Bitshares – with a function that can be described as the World's blockchain operating system, independent of any single jurisdiction. We strongly support the responsible blockchain concepts laid out in PwC's report "Building block(chain)s for a better planet" as one of the elementary parts of the Fourth Industrial Revolution (4IR). 4IR represents the rise of interconnected and increasingly ubiquitous technologies such as the Internet of Things (IoT), virtual reality (VR) and artificial intelligence (AI). Interestingly, the very concept of SovereignSky came from co-creator; Timothy E. Burke sci-fi franchise called "Planet X" - which also includes a movie, online gaming and interconnected VR virtual worlds (which are now being sold as NFTS). Infact, all these projects are connected and you'll be able to use the Sovereign blockchain inside those virtual worlds.

More than any set of new technologies in the past, these technologies are not only technological but also social revolutions that play a major role in the dawn of a new society. We have the advantage of being one of the adopters and star actors in this new society, and therefore the opportunity to shape things to come.

In today's blockchain sphere, it is our responsibility to make sure that the new society we are building is one of mutual trust and respect and fair and equal access for all, as it is easier to shape a social movement the right way from the beginning than try and change it after decades of existence.....

June 2021, https://www.cnet.com/news/bitcoin-dogecoin-and-ethereum-are-crashing-heres-why/

Funding Smart Contract developers to build on Sovereign

In all of these instances, blockchain technology can be utilized to support and replace conventional and outdated technologies that are currently being used in addressing digital, financial and social challenges. SovereignSky is the perfect new, green, alternative blockchain to solve these problems as its the fastest and most scalable and you can also build on it just like Ethereum. We aim to start funding developers to build on SovereignSky using smart contracts just like with Ethereum in Q421.

However, there is another, even more revolutionary way of applying blockchains in the world, that have never before been possible, and that is launching them into space. Please see page 18.

SovereignSky Plans to Mitigate Blockchain Risk

Blockchain technology is a significant step forward for a better tomorrow. However, results do not come without risk. PwC report **"Block(chain)s for a better planet"** points out several risks and disadvantages potentially associated with blockchain technology:

🛰️ **Adoption Challenges User**

Experience and usability.

🛰️ **Technology Barriers**

Limited transaction capacity and scaling.

🛰️ **Security Risks**

Data leaks and unintended data sharing.

🛰️ **Legal and Regulatory Challenges**

Unclear legal jurisdictions and regulatory barriers.

🛰️ **Interoperability Risks**

Lack of standards.

🛰️ **Energy Consumption Challenge**

Energy-intensive PoW.

SovereignSky aspires to address several of these risks directly with:

🛰️ User-friendly application eco-system that resolves adoption challenges.

🛰️ Sufficient scalability to serve the blockchain ecosystem and power the economies of a whole planet using EOS technology.

🛰️ No legal challenges of adaptation to different regulatory frameworks, as it is located in space.
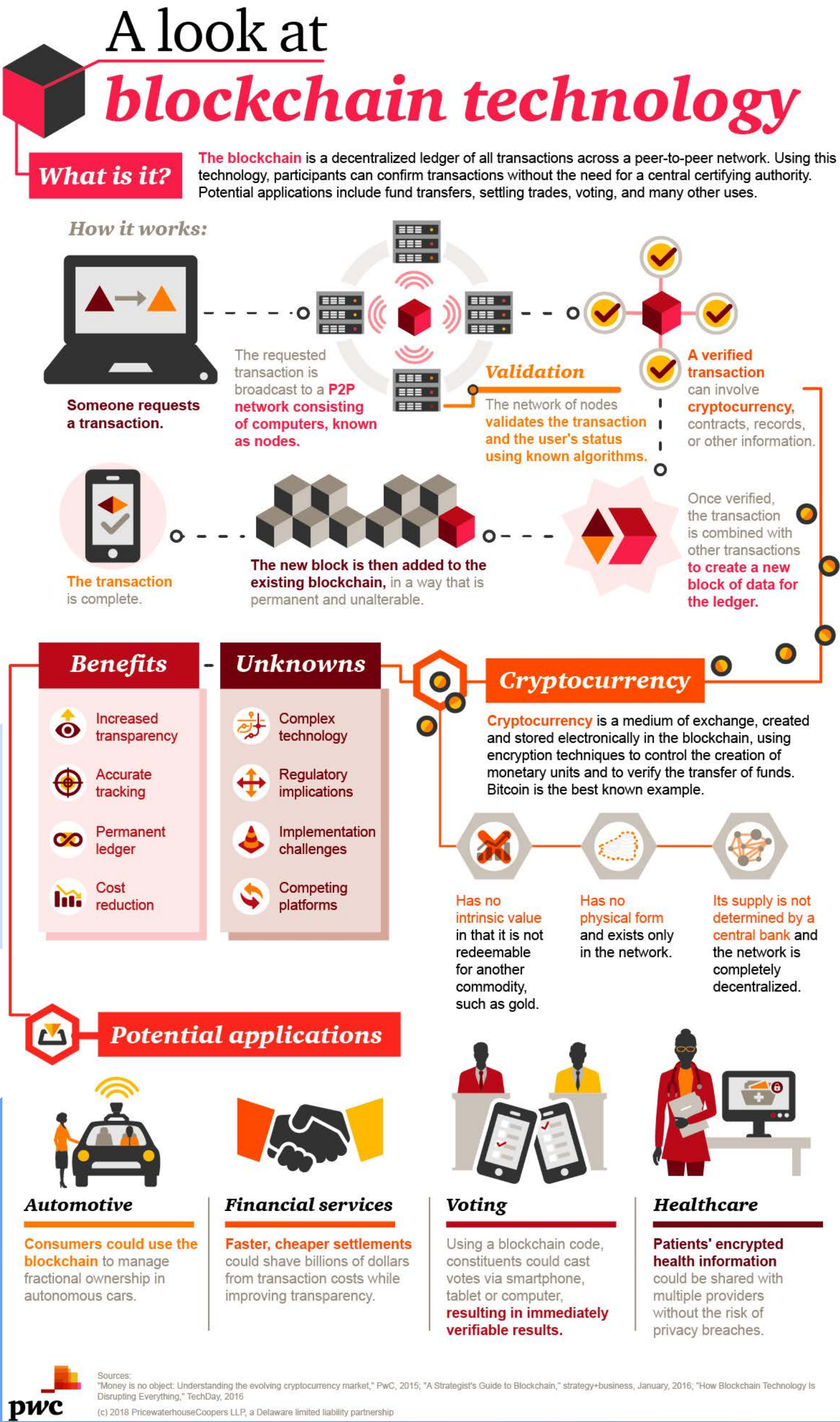
🛰️ New standards and regulations.

🛰️ EOS's energy-efficient consensus algorithm making it have the lowest carbon emissions.

2. Solving Tomorrow's Challenges with SovereignSky

There are a number of ways in which a sufficiently refined blockchain system like SovereignSky can help solve the challenges posed by current developments.

The technologies of the 4IR, and blockchain technology in particular, wish to be uniquely suited to addressing and solving these challenges. They plan to provide the opportunity to create value while saving resources in an unprecedented manner, if deployed in the right way. In the following section, we will discuss how exactly blockchain technology (see figure PWC below) needs to be applied to solve today's challenges and how SovereignSky hopes to incorporate all the necessary characteristics for tomorrow's blockchain ecosystem.

A look at blockchain technology

What is it?

The blockchain is a decentralized ledger of all transactions across a peer-to-peer network. Using this technology, participants can confirm transactions without the need for a central certifying authority. Potential applications include fund transfers, settling trades, voting, and many other uses.

How it works:

Someone requests a transaction.

The requested transaction is broadcast to a **P2P network consisting of computers, known as nodes.**

Validation

The network of nodes **validates the transaction and the user's status using known algorithms.**

A verified transaction can involve **cryptocurrency,** contracts, records, or other information.

The transaction is complete.

The new block is then added to the existing blockchain, in a way that is permanent and unalterable.

Once verified, the transaction is combined with other transactions **to create a new block of data for the ledger.**

Benefits

- Increased transparency
- Accurate tracking
- Permanent ledger
- Cost reduction

Unknowns

- Complex technology
- Regulatory implications
- Implementation challenges
- Competing platforms

Cryptocurrency

Cryptocurrency is a medium of exchange, created and stored electronically in the blockchain, using encryption techniques to control the creation of monetary units and to verify the transfer of funds. Bitcoin is the best known example.

Has no intrinsic value in that it is not redeemable for another commodity, such as gold.

Has no physical form and exists only in the network.

Its supply is not determined by a central bank and the network is completely decentralized.

Potential applications

Automotive

Consumers could use the blockchain to manage fractional ownership in autonomous cars.

Financial services

Faster, cheaper settlements could shave billions of dollars from transaction costs while improving transparency.

Voting

Using a blockchain code, constituents could cast votes via smartphone, tablet or computer, **resulting in immediately verifiable results.**

Healthcare

Patients' encrypted health information could be shared with multiple providers without the risk of privacy breaches.

Sources:
"Money is no object: Understanding the evolving cryptocurrency market," PwC, 2015; "A Strategist's Guide to Blockchain," strategy+business, January, 2016, "How Blockchain Technology Is Disrupting Everything," TechDay, 2016

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SovereignSky plans to implements key features from **"Building block(chain)s for a better planet":**
Past innovations have increased wealth and comfort for a small subset of nations and individuals and have created a number of unsolved challenges. What we need now for tomorrow - is a revolution of **equality** and **sustainability** and **blockchain technology** to address these global challenges:

Climate

- Today's greenhouse gas levels may be the highest in 3 million years, rising to 412 parts per million in May 2018.

- Changes in precipitation, extreme storms, rising sea levels, coastal inundation and heatwaves directly affect people's security, economic well-being and health. For instance, deaths caused by extreme heat in Europe are projected to rise to 150,000 a year by 2100.

Biodiversity and Conservation

- The Earth is losing its biodiversity at mass extinction rates. One in five species on Earth now faces eradication. This statistic will rise to 50% by the end of the 21st century unless we take urgent action.

- Current deforestation rates in the Amazon Basin could lead to an 8% drop in regional rainfall by 2050 which will in turn trigger a shift to a "savannah state" with wider consequences for the Earth's atmospheric circulatory systems. Biodiversity loss has a direct human impact – threatening energy, clean water and food supply.

Healthy Oceans

- The chemistry of the oceans is changing more rapidly than at any time in 300 million years, as the water absorbs anthropogenic greenhouse gases. The resulting ocean acidification and warming are leading to unprecedented damage to fish stocks and corals.

- Some 8 million tons of plastic are predicted to enter the oceans each year. Plastics – and the toxins they frequently carry – accumulate in the food chain and find their way back into humans. Estimates suggest around 6,400 microplastics per year are ingested by the average European shellfish consumer.

Water Security

- The world's demand for water has grown by around 1% per year. By 2030, we may fall 40% short of the amount of fresh water needed to support the global economy as pollution and climate change affect the global water cycle.

- For 1.9 billion people, water scarcity is already a reality – this number is expected to rise to 3 billion by 2050. Microplastic fibres were found in 83% of tap water samples around the world and more than 90% of bottled water analyzed.

Clean Air

- Around 91% of the worlds population live in places that fail to meet World Health Organization (WHO) air-quality guidelines.

- Around 7 million people die annually from exposure to air pollution – one death out of every eight globally.

Weather and Disaster Resilience

- In 2017, the world suffered 710 geophysical, meteorological, hydrological and climatological "natural-loss events" – almost triple the number it suffered in 1980.

- These events caused approximately $330 billion in damages, less than half of which was covered by insurance. In parallel, 23 million people were displaced.

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Climate Change

- **Peer-to-peer renewable energy - trading systems.**
- **Crowdsale for renewable energy investment.**
- **Optimized distributed grid managment.**
- **Authentication of renewable energy certificates.**
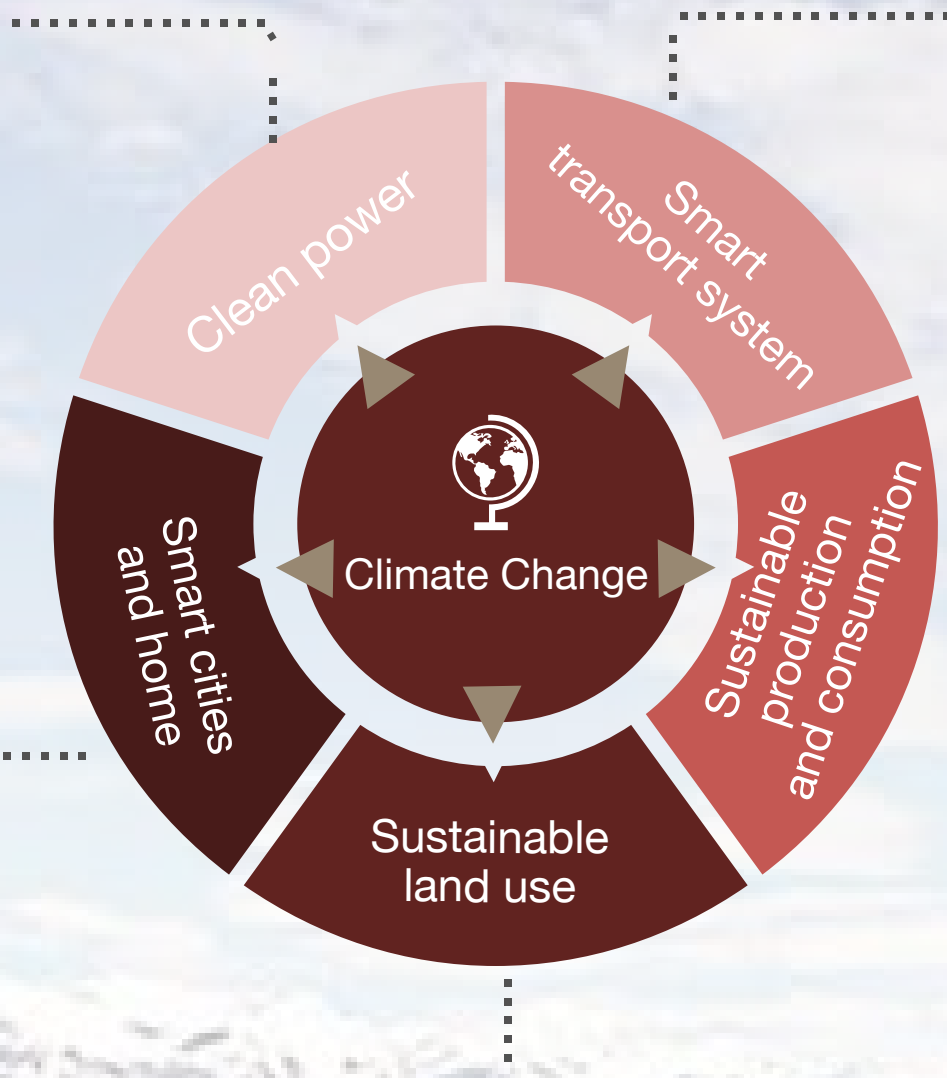
- **Blockchain-based land, corporate, civil and asset registries.**
- **Citizen loyalty and reward platforms for climate action.**
- **Decentralized voting platforms for climate action.**
- **Secure paperiess transactions.**

- **Data leader for optimized transport logistics.**
- **Blockchain-based decentralized delivery networks.**
- **Peer-to-peer vehicle sharing.**
- **Smart parking system for optimized mobility management.**

- **Ledger for collection and verification of ESG data.**
- **Soil properties data collation from distributed sensors.**
- **Blockchain-powered platform for carbon offsetting.**
- **Waste-to-energy blackchain solutions.**

- **Blockchain-enabled sustainable mining.**
- **Automotion of data collection and management accounting.**
- **Financing sustainable land use.**

Clean power / Smart transport system / Sustainable production and consumption / Sustainable land use / Smart cities and home / **Climate Change**

Biodiversity and Conservation

- **Electronic currency for investment in habitat restoration and species conservation.**
- **Tracking geographic reach and movement of endangerred species.**
- **Incentivization for farmers to protect habitats.**
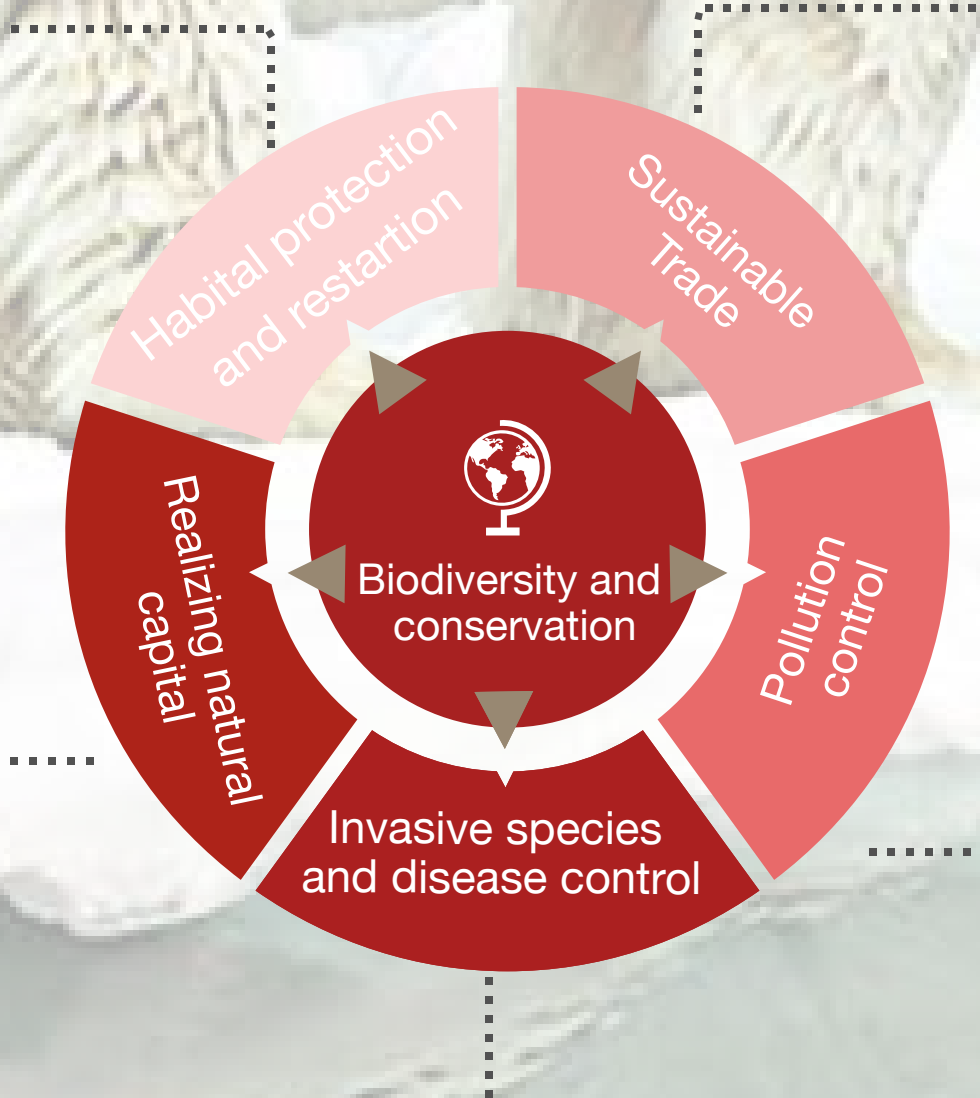
- Timber and other natural resources provenance tracking.
- A decentrarized natural asset exchange platform

- **Transparent monitoring of supply chain transactions.**
- **Real-time traceability of supply chairs.**

- **Recording of pesticide use on agricultural land.**
- **Incentivized system for responsible waste management**

- Digital data platform for species tracking and disease control.

Habital protection and restartion / Sustainable Trade / Pollution control / Invasive species and disease control / Realizing natural capital / **Biodiversity and conservation**

Healthy Oceans

- Tracking fish provenance.
- Monitoring of illegal fishing activities.
- Real-time monitoring of ocean temperature and pH.
- Incentivized collection of data on ocean conditions.
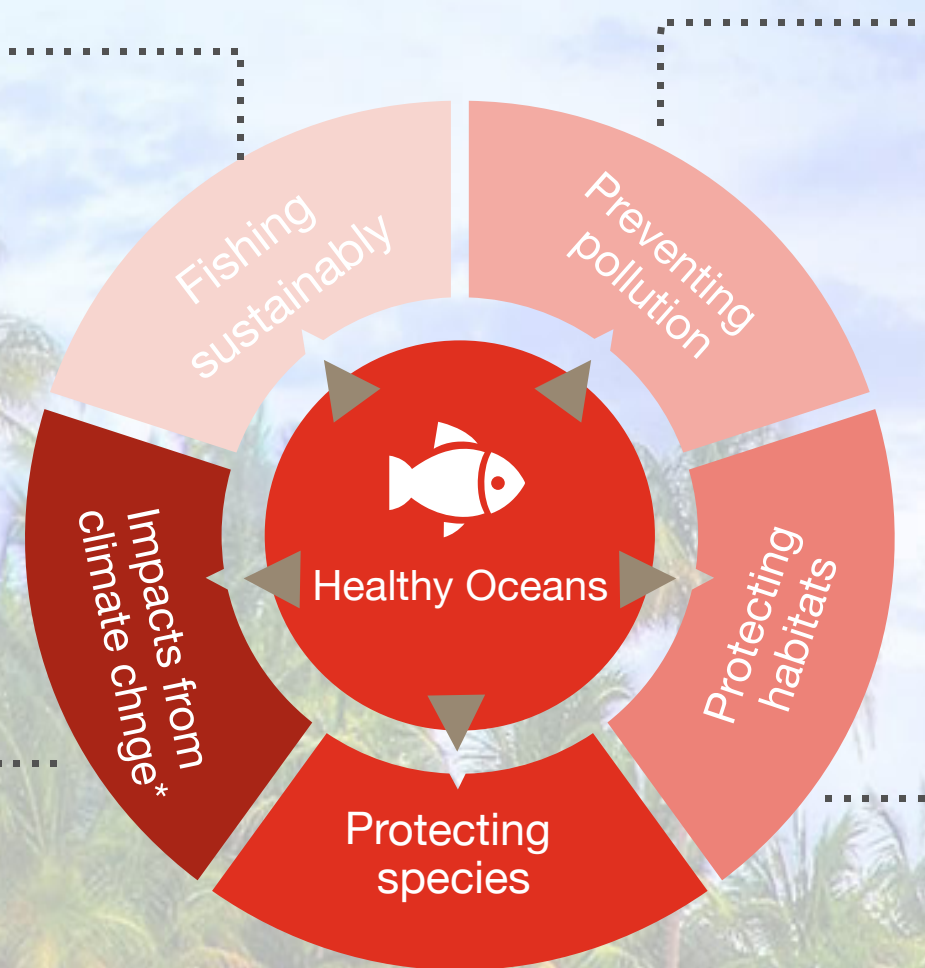
- Incentivized ocean plastic recycling initiatives.
- Transparent ledger for faster, safer and more efficient shipping.
- Decentralized and open-source ledger of ocean data.
- Fundraising for marine wildlife conservation.

Fishing sustainably

Preventing pollution

Impacts from climate chnge*

Healthy Oceans

Protecting habitats

Protecting species

Water Security

- Water monitoring and management.
- Micropayments for water meter donations.
- Precipitation intensity monitoring and forecasting.
- Automated crop insurance for drought periods.
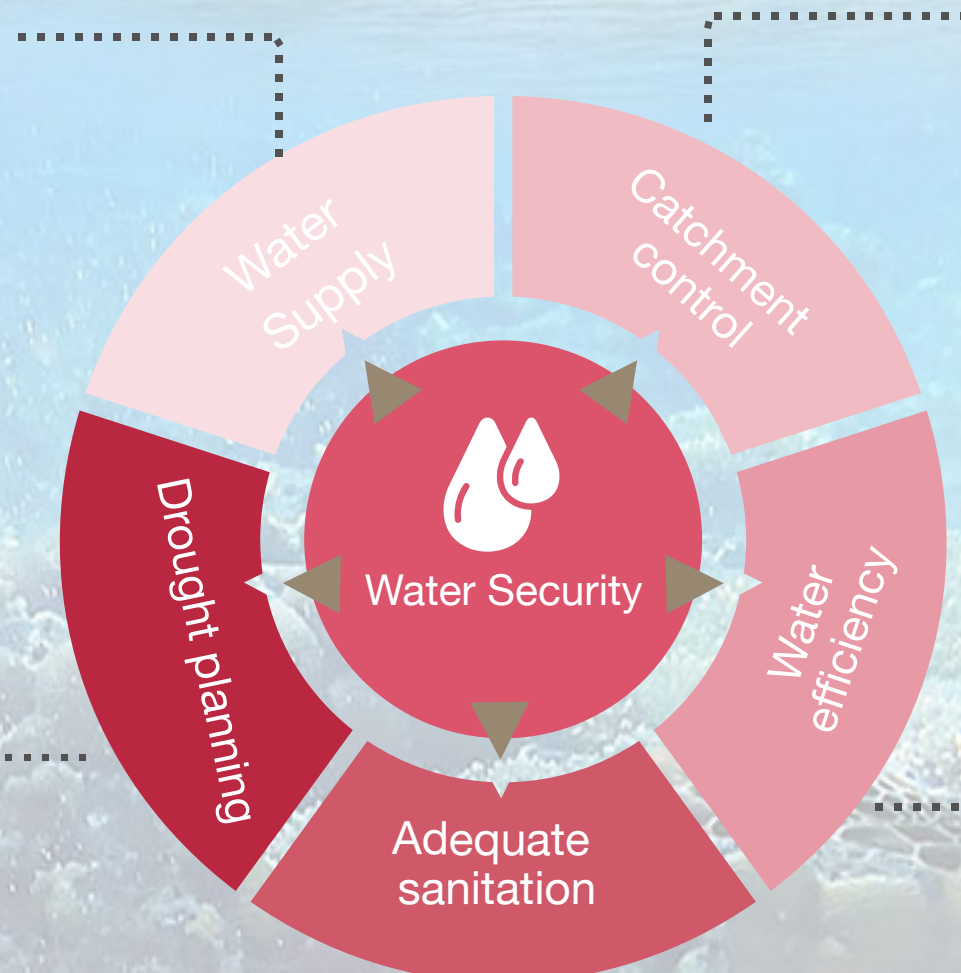
- Deecentralized, catchment-based approach to improving water quality.
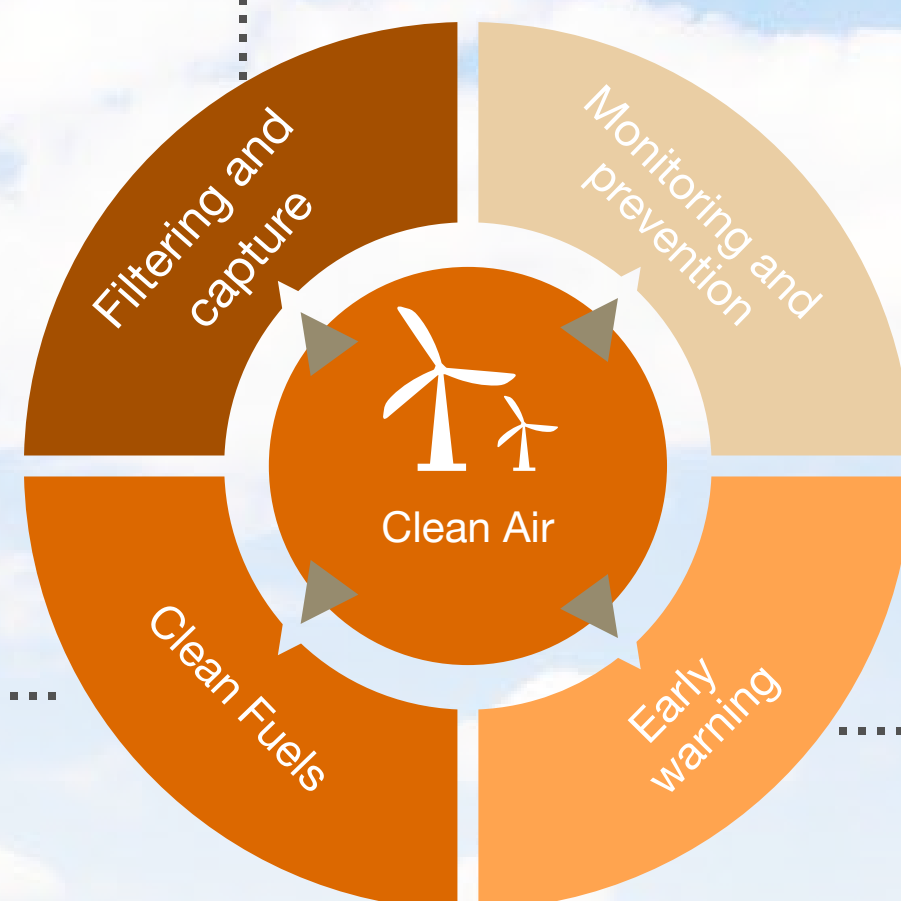- Water quality control in catchment areas.
- Blockchain-enabled peer-to-peer trading of excess water resources.
- Electronic currency-enabled smart meters.

- Asset-backed token system for clean, accessible drinking water.
- Hyperlocal water data for monitoring water quality.
- Efficient water treatment systems

Water Supply

Catchment control

Drought planning

Water Security

Water efficiency

Adequate sanitation

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Clean Air

- Air Pollution data collection from distributed sources
- Automated activation of air-filtration devices

- Local and real-time monitoring of particulates and NO2
- Intelligent methane monitoring systems

- Electronic currency payments for EV public charging
- Enabling safe and realiable AV implementation

- Automated air-quality monitoring system
- Early detection of toxic chemical leaks

Filtering and capture

Monitoring and prevention

Clean Air

Clean Fuels

Early warning

Weather and Disaster Resilience

- Extreme weather impact analysis
- Ledger to identify, verify and transact weather data

- Real-time monitoring of natural hazards
- Decentralized weather sensors generating automated alerts

- Enhanced emergency disaster response

- Automatic rerouting of power to prevent blackouts
- Decentralized mini-grids improving disaster resilience

Prediction and forecasting

Early-warning System

Resilience Planning

Weather and disaster resilience

Resilient Infrastructure

Financial Instrument

- Disaster recovery funding
- Decentralized disaster insurance platforms
- Management of transactions in response to extreme weather event
- Crowdsale for adaptation investments

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"A concept or idea, however big, can be achieved by **four** things: the advancement of technology, and the intrinsic motivation to solve problem, plain old hardwork ....and good old fashioned, good luck!"

- Timothy E. Burke, Sovereign Co-Founder

Whilst being aiming to be a perfect currency for peer-to-peer and swaps we also plan to provide our advanced, government-friendly, blockchain technology for big business, Fortune 500s, institutions and even small countries emerging onto the blockchain.....

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A Green, Global Financial instant settlement solution for big business

SovereignCoin (or Sovereign Currency) seeks to become one of the largest financial and digital infrastructures connecting hedge funds, central banks, family offices, pension funds, Fortune 500 companies, and sovereign funds for global trade and an alternative world payment system for the $155 trillion in cross-border transactions made each year.

SovereignSky aims to become the first space-based 'stable' digital commercial currency by having its corporate clients back the currency and their transactions and trade with hard assets which are verified and integrated into SovereignSky's blockchain. It seeks to be a payment and deposit solution in near real-time (SovereignSky is one of the fastest blockchains for banks, financial companies, corporate businesses and international companies specializing in large volume transactions from high value real estate deals, aerospace and defense contracts, tier one mergers & acquisitions and national debt processing to large-scale business transactions and international energy, commodity and oil trading. Fortune 500 companies and large-scale corporations can also adopt SovereignSky as a Whitelabel solution called 'Sovereign Goldlabel', providing these companies their own digital currency that can be used as their own stand-alone solution or connected to Sovereign's main global space and ground based currency.

SovereignSky targets to provide the premiere network for cross-border payment solutions from bank to bank, business to business, whilst providing a stable and near real-time network for liquidating digital currency to fiat at international financial institutions and banks across the globe. SovereignSky can also be a solution for smaller nations wanting to open trading channels with large corporations and businesses within the SovereignSky International network. SovereignSky plans to stimulate economic growth by connecting to a nation's central bank and sovereign funds as well as treasuries and national monetary depositories, called 'Sovereign Nation Protocol (SNP', that provides nation-to-nation settlement solutions within a digital financial framework at a fraction of the cost and time as traditional banking methods. SovereignSky wishes to provides a global digital payment solution between central banks and corporations in seconds not days.

Every stage of the payment cycle plans to be reported on the blockchain ledger to provide total transparency and visibility through the whole transaction. The currency plans to specialize in large scale B2B transactions of the highest level whilst also providing a micro framework for peer-to-peer instant transactions.

Welcome to a new eco-friendly green World currency. Made by the people for the people.

**One Coin to rule them all.
Welcome to Sovereign**

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3. Freedom and Decentralization in Space

Although blockchain technology was originally conceived to put an end to inefficient regulation and the arbitrariness of central authorities and their laws, today's reality looks different: innovators and founders in the blockchain world are constantly on the lookout for places that will permit them to pursue their visions freely, without prosecution based on obsolete laws of earlier centuries.

SovereignSky will be working with its partners in congress and the government and the SEC, including an ex-commissioner of the SEC, to create a blockchain that will survive big regulation sweeps in the future. We feel a blessing and backing from government related entities will actually please both our users, developers and our contributors in the long run. Infact, EOS has paid $24 million in penalties for conducting an unregistered securities sale, and now is in the clear by the SEC after its $4 Billion ICO public token sale - so SovereignSky, being an exact clone of EOS (but stripped down to work on satellites) has already been grandfathered with regulators.

Much of founders' resources, be it money, time or brainpower, is nowadays wasted on such trivial issues as finding a suitable headquarters for their operations.

SovereignSky plans put an end to this waste and inefficiency: Space is the final frontier and haven for innovators and inventors, for entrepreneurs and business people, from developing and developed countries alike. It is the ultimate conquest of traditional centralization and command – it replaces centralized dependence with decentralized and distributed connectivity, freedom & independence.
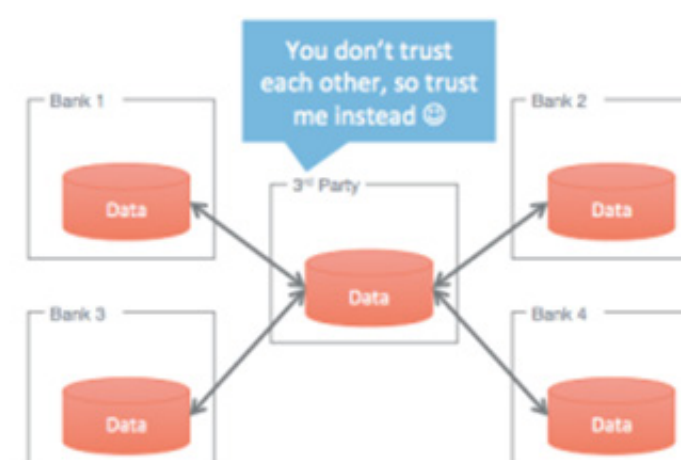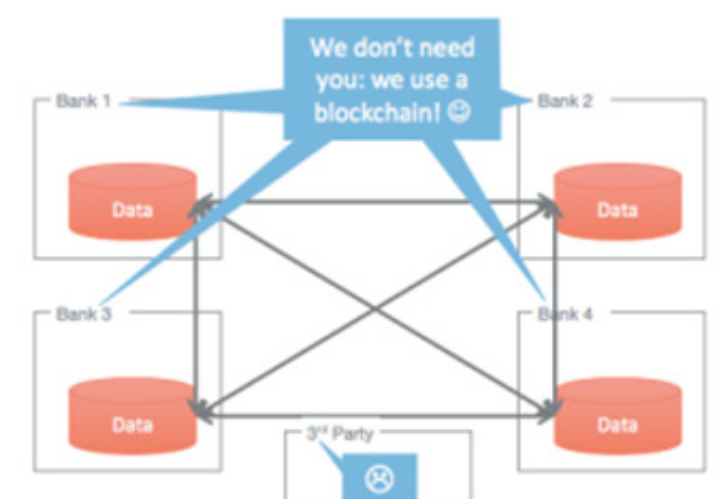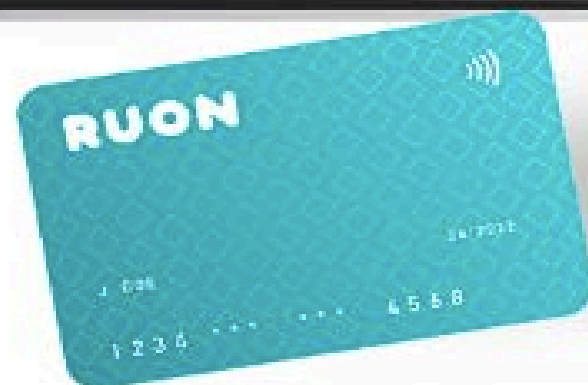
"SovereignSky aims to beam electronic currency from space to portable modems connected to android phones with RUON AI pre-installed which have been distributed to villages, orphanages, hospitals and people in need situated in the poorest and remotest parts of the world".

- SovereignSky Team

How it Works:
https://medium.com/@ruonapp

Inside the SovereignSky 'Solar Connectivity Box'

4. Solid Foundations: The Technological Basis of SovereignSky Graphene blockchain

SovereignSky aspires to be based on two of the most revolutionary blockchains of recent years: **Bitshares** and **EOS,** both based on the 'Graphene blockchain' implementation and part of 'Bitshares Godfather's; Stan Larimer's Cryptonomex family of companies.

Did you know? Upto 75% of all blockchain traffic touches a creation by the Larimer name.
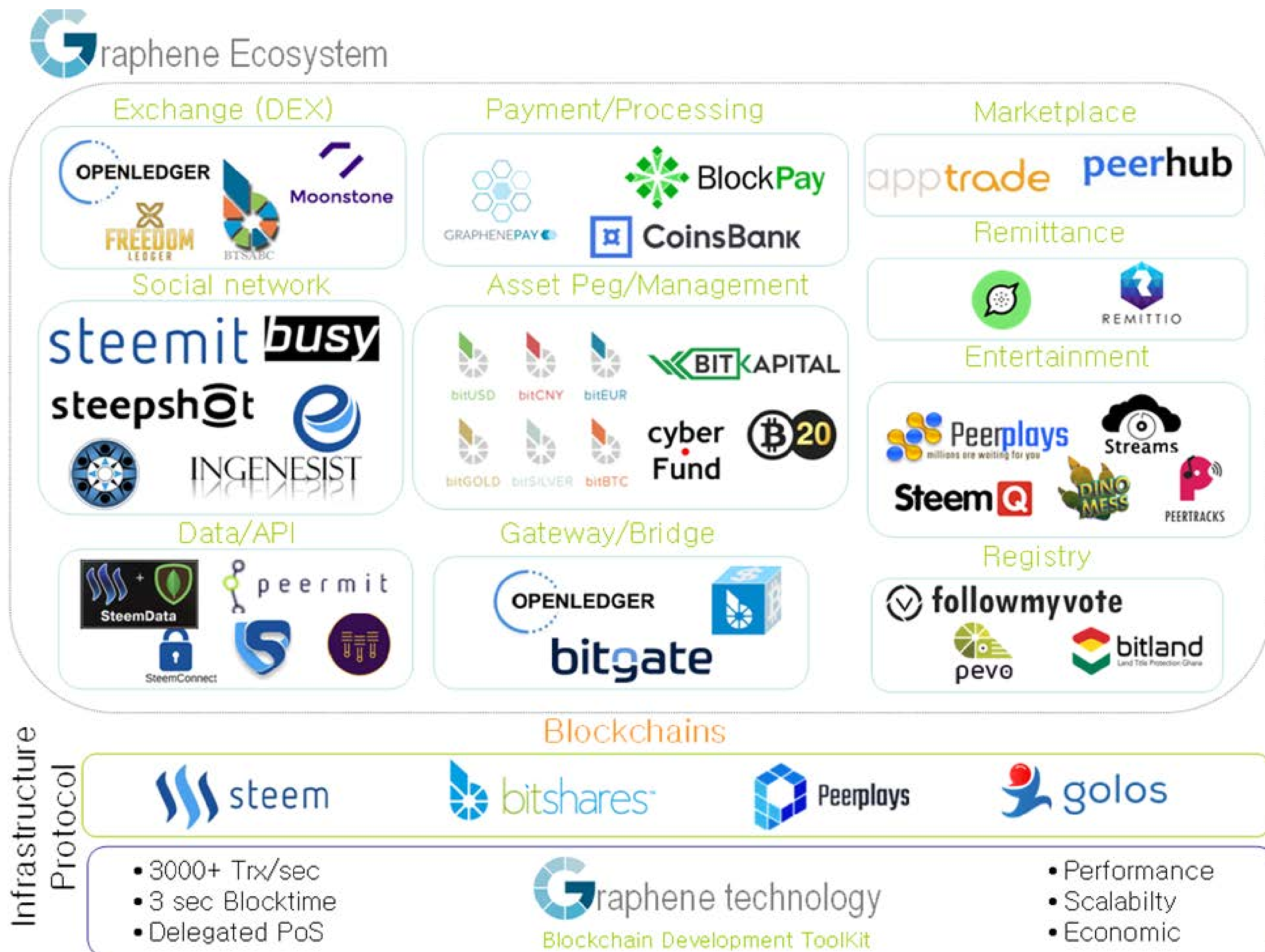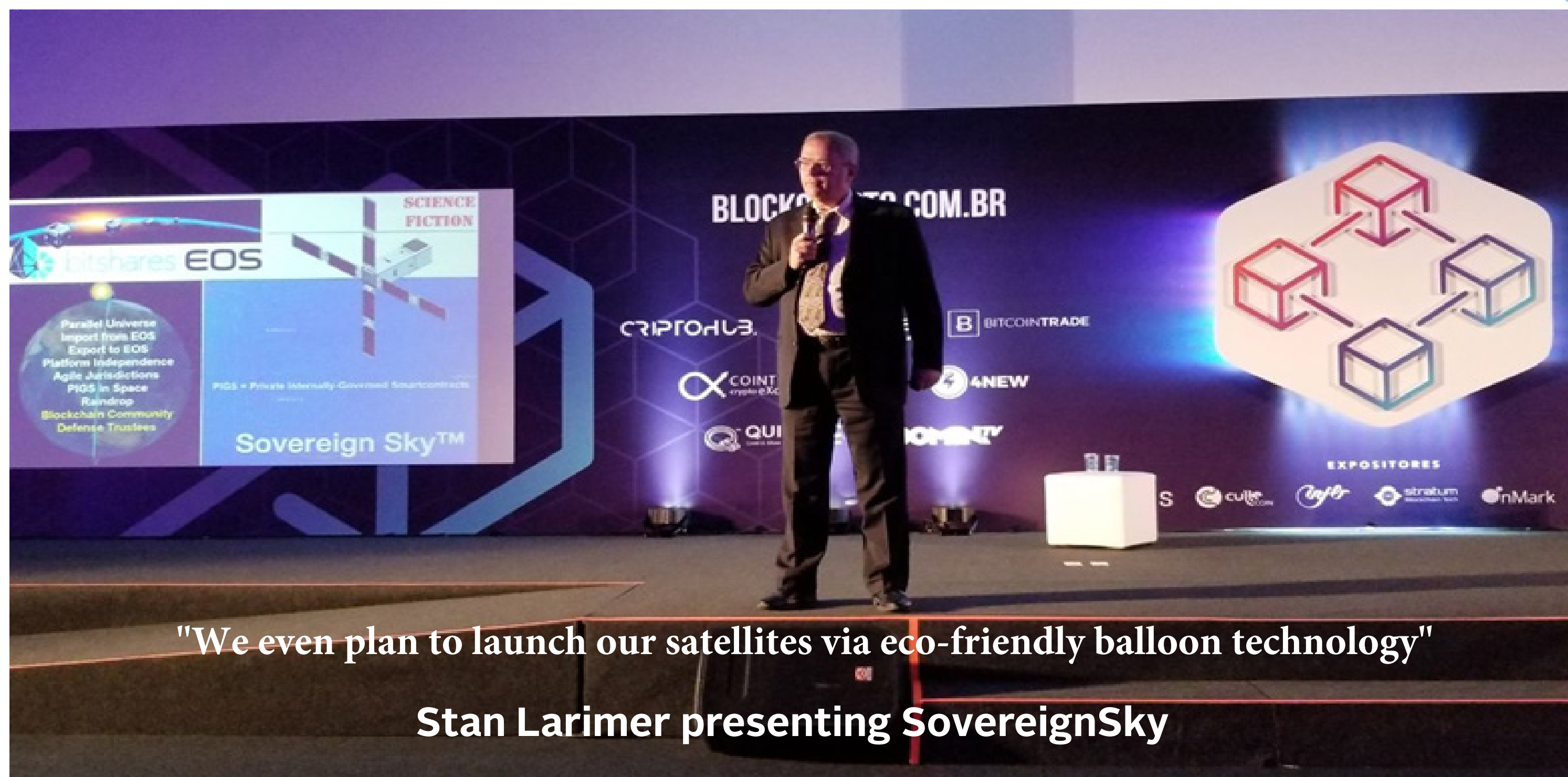

Bitshares is a blockchain-based real-time financial platform and <u>**the most powerful blockchain ecosystem of its time,**</u> an industrial-grade crypto-equity peer-to-peer distributed ledger and network using a Delegated Proof of Stake (DPoS) consensus algorithm.

It offers market participants the opportunity to create decentralized autonomous companies (DACs), based on smart contracts. These companies, as their name suggests, are run automatically, without human intervention, and can for example sell shares and distribute profits between their shareholders. Bitshares's token, BTS, is more than a traditional electronic currency it functions as equity and collateral for decentralized financial services – such as so-called smart coins or stable bitAssets which track the movements of real-world market assets (for example, bitUSD), which are more stable and predictable and less volatile than commonly traded electronic currency assets.

5.Sovereign Solution

SovereignSky plans to be a space, eco-hybrid blockchain, based upon the technological paradigms that were pioneered by Bitshares and EOS. Both of them were revolutionary developments in recent times – BEOS whitepaper at the end of this paper – and will now serve as fertile grounds for a new and ground breaking blockchain-in-space.

The overarching goal of SovereignSky is to create a satellite network that will deliver not only blockchain (and social media) connectivity, but direct access to an extremely powerful blockchain network with ground stations in Africa, India, South America, and in the long-term to developed countries as well. This will enable Sovereign's electronic space currencies called **"Sovereign",** its space charity coin **"SovereignAid",** social media coin **"RUON" (see www.ruon.ai)** and **"gold-backed stable coins" (see www.quintric.com)** to be sent to the RUON app or mobile phones in the 'solar connectivity boxes'; to be distributed in time to regions in need, by the Sovereign team.

"We even plan to launch our satellites via eco-friendly balloon technology"

Stan Larimer presenting SovereignSky

Recipients of the RUON app and smartphone thus will hopefully be able to gain direct access to a network that gives them vast opportunities for entrepreneurial action. In order to achieve this, SovereignSky plans to build its own space-based blockchain, modeled after the co-founder's previous successes of Bitshares and EOS. Over the next few years, SovereignSky working with charities and agencies will aim to distribute mobile phones with pre-installed RUON app, in developing countries to accelerate adoption and ultimately a method for the hopeful resolution of extreme poverty. Please see page 18.

SovereignSky Specifications: The BEOS Ecosystem

SovereignSky targets to eventually place the majority of nodes on the BEOS blockchain in orbit where they can operate safely in international space, away from unnecessary innovation-stifling of regulation. Right now, SovereignSky nodes are also setup on cruise ships to operate in international waters.

https://steemit.com/bitshares/@stan/beos-transactions-in-international-waters

BitShares EOS (BEOS) is a clone and optimization for business of the EOS blockchain with interfaces to the powerful BitShares decentralized exchange and smart coin factory. BEOS serves as a middle chain between the BitShares DEX (bitshares.org) and the EOS.IO universe. BitShares, BEOS, and EOS, as well as other blockchains derived the Cryptonomex technology base, are powered by the "Graphene blockchain" implementation and thus the 'Delegate Proof of Stake' (DPoS) consensus mechanism. This system avoids the centralized, power wasting characteristics of mining-based Proof of Work (POW) blockchains.

One of Bitshares most attractive and revolutionary features is its decentralized exchange, Bitshares DEX, which is also based upon Bitshares original technology, and is resilient against the hacks that have plagued electronic currency exchanges in the past (like, for example, the notorious Mt. Gox).

Furthermore, the Bitshares network is exceedingly fast, with an average block time of 1.5 seconds and a potential throughput of 50,000 - 100,000 transactions per second.

EOS in Short

The EOS protocol is designed to facilitate the development, hosting, and execution of industry-scale dapps on its smart contract platform.

EOS has solved the issues that have been hampering progress and blockchain adoption in Ethereum, the pioneer of smart contract execution. In contrast to Ethereum, EOS provides many crucial functions that smart contract and dapp developers need again and again in their applications, and it introduces role-based permissions into the blockchain landscape. Furthermore, it provides a mechanism by which broken applications may be fixed without resorting to a hard fork.

Being developed by the same leading team as the Bitshares technology, it shares some of Bitshares's features: first, it runs on the Graphene blockchain implementation and thus employs a Delegated Proof of Stake (DPoS) consensus algorithm, which is a favorable choice for blockchains that seek commercial scalability. In fact, it has a similarly impressive scalability as the Bitshares network described above. EOS has a legally binding framework that defines a common jurisdiction for dispute resolution, and thus addresses the often-faced problem of jurisdictional uncertainty in blockchain businesses. EOS is destined to become the smart contract platform of the future not least due to its superior economic model: while in Ethereum and similar implementations, the network's computing power can merely be rented by the user, and paid for in gas, in EOS token holders become owners of a certain percentage of the network's computational power, bandwidth and storage. This enables them to rely on steady and predictable access to a certain amount of resources, independently of any market movements and price changes.
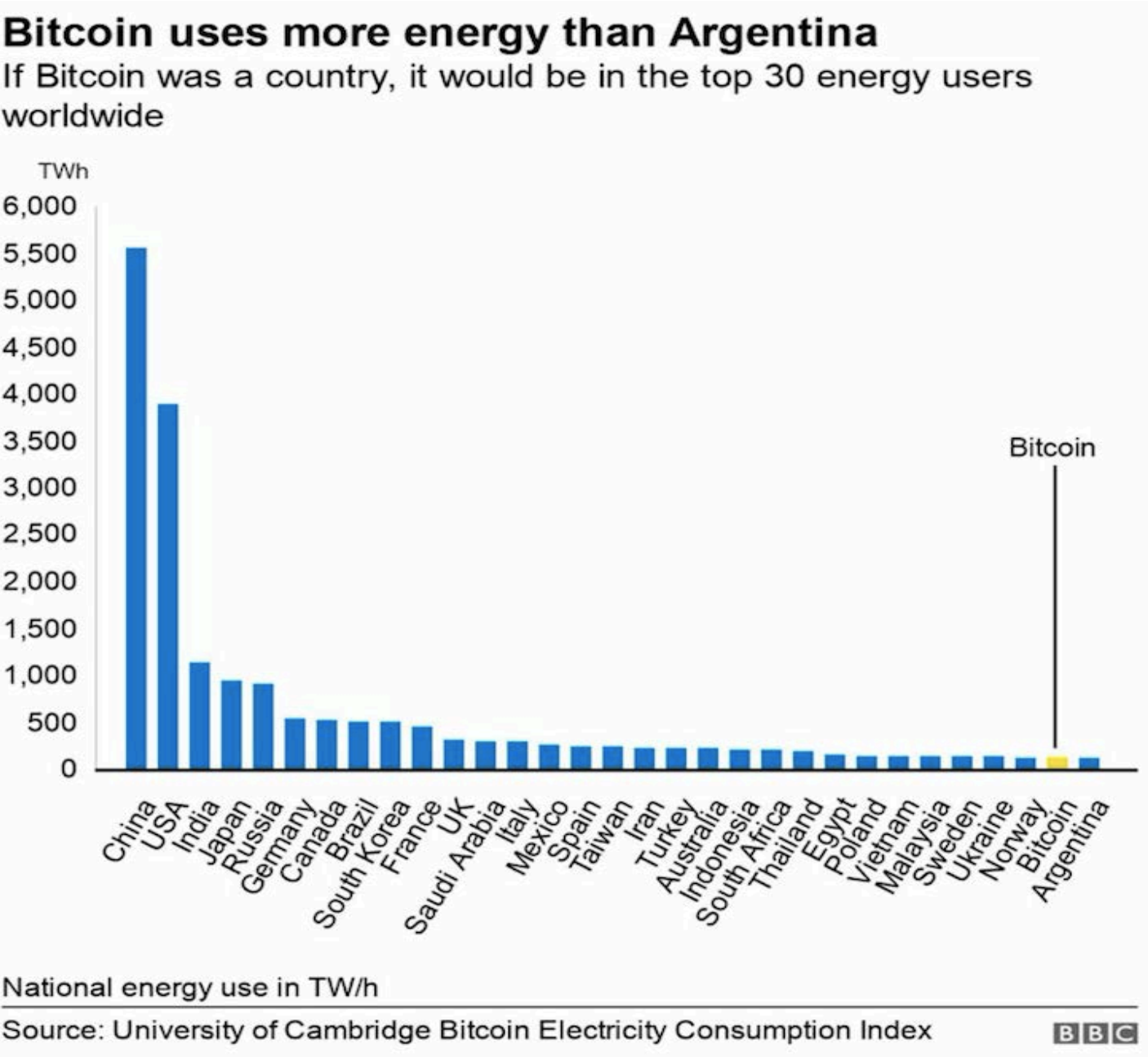
Delegated 'Proof of Stake'

Collectively this family of "DPOS" (Delegated 'Proof of Stake') graphene-based technology blockchains (including BitShares, Steem, BEOS, WAX, TLOS and EOS) processes over 75% of the entire world's blockchain transactions.and which together only process 3.5% of the world's transactions. Imagine in 20 years; SovereignSky might be powering a very large percentage of the world's transactions especially as the large corporations come online. This is why its now essential to fund, launch and build on the eco-friendly and solar-powered SovereignSky blockchain so it can become the world's future blockchain operating system. This is the absolute best alternative to the huge power consumption mining-based blockchains such as Bitcoin and Ethereum which have, in May 2021, started to generate very negative press. This includes Elon Musk's tweets; pulling BTC out of future Tesla transactions. Now, the world knows that a low carbon emissions blockchain is needed for its future global financial systems, especially when BTC uses more energy than Argentina!

The time now is for SovereignSky.

And, these mining-based chains are also saturated with no room to grow to handle more transactions while the DPOS chains barely move their sweat-o-meters off zero (see blocktivity.info). More importantly for space-based applications, DPOS nodes only sip power while mining based chains are huge wasters of power that would require an orbiting coal power plant to run them. This makes DPOS uniquely well suited for space-based applications.

Bitcoin uses more energy than Argentina
If Bitcoin was a country, it would be in the top 30 energy users worldwide

National energy use in TW/h
Source: University of Cambridge Bitcoin Electricity Consumption Index

Tesla will no longer accept Bitcoin over climate concerns, says Musk

Elon Musk said cryptocurrency could "not come at great cost to the environment"

Operations on the most active Blockchains (7 Day average)

'Delegate Proof of Stake' (DPoS) has been developed by Dan Larimer, son of SovereignSky's Co-founder Stan Larimer. His objective in the development of this novel consensus mechanism was to re-establish true decentralization in the blockchain sphere. Concerns were growing that existing consensus schemes, such as 'Proof of Work' (PoW) were developing towards consolidation of resources and thus an increasingly centralized distribution of power, at odds with Satoshi Nakamoto's original vision for blockchains and with the vast majority of the blockchain community's expectations and aspirations.
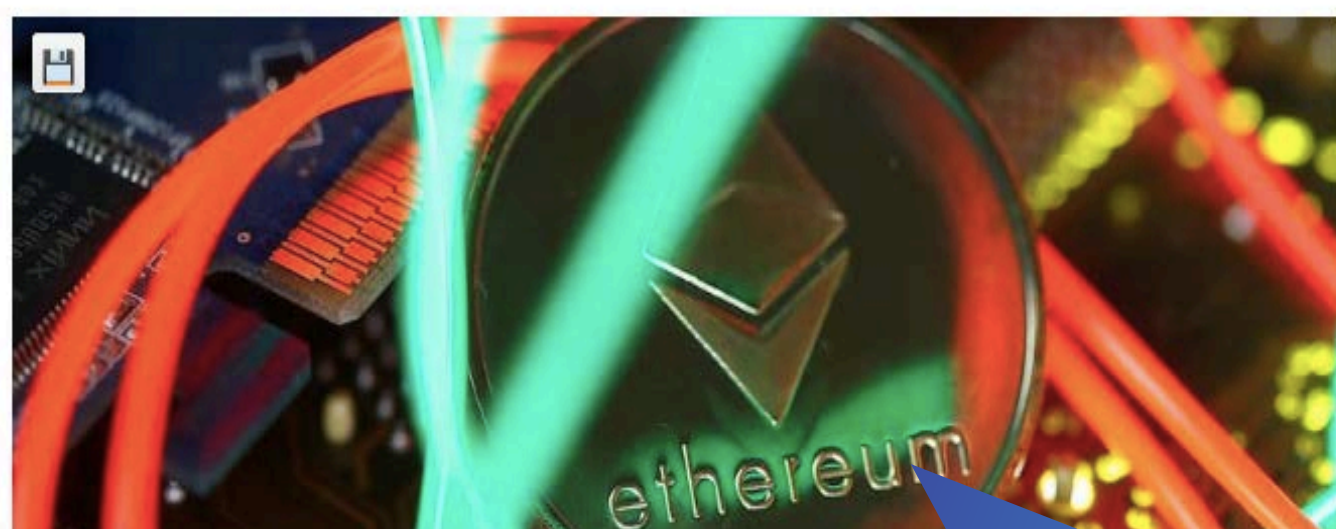

ETH: 1.6 %
BTC: 1.9 %
STEEM: 2.8 %
BTS: 4.1 %
TRX: 6.6 %
TLOS: 12.7 %
WAX: 14.6%
Rest: 2.7 %
EOS: 53.1 %
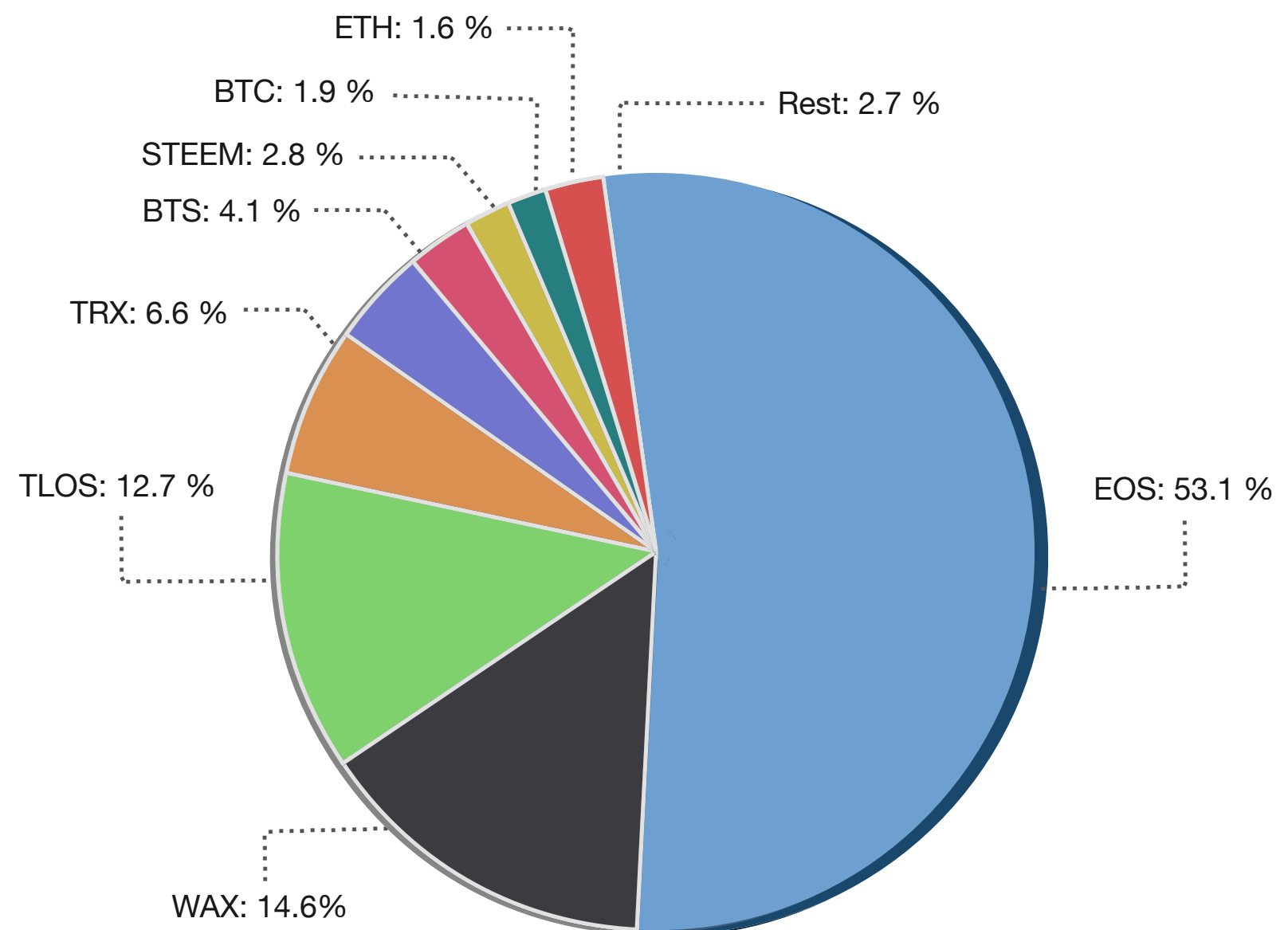
Blockchains by activity

## Ethereum Struggles under the Weight of DeFi Growth: Is ETH Doomed to Fail?

As DeFi's popularity grows, Ethereum is becoming more and more congested. What does this mean for the future?

Rachel McIntosh | News (CryptoCurrency) | Thursday, 03/09/2020 | 12:31 GMT+2

Ethereum Transaction Fees Set a Record Once Again as DeFi Becomes Even Pricier

Ethereum Average and Median Daily Transaction Fees (USD)
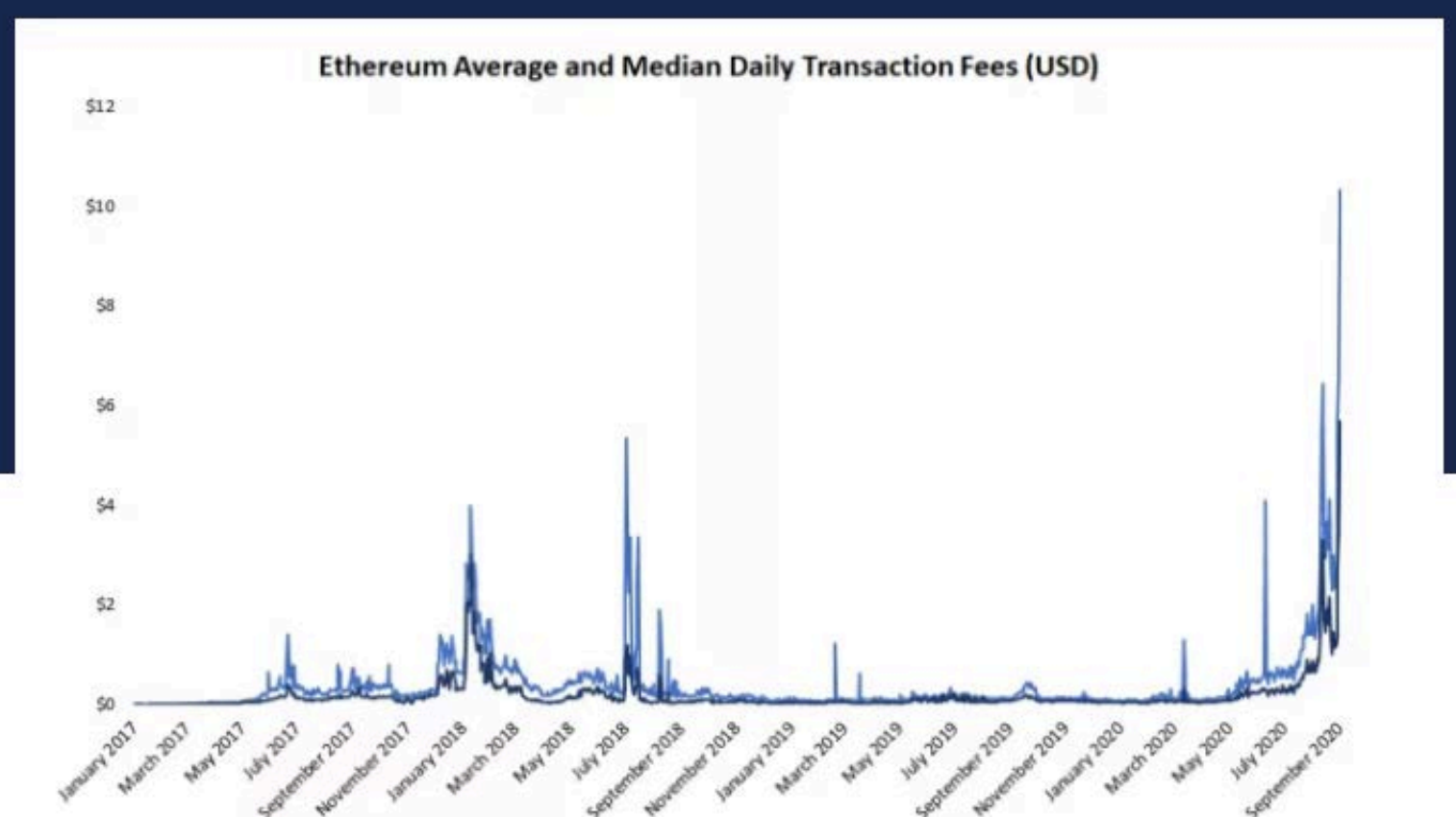
SOVEREIGN IS ALSO MUCH CHEAPER THAN ETHEREUM.

DPoS consensus schemes

Due to the limited number of elected representatives who are responsible for transaction validation, DPoS consensus schemes are not only fairer and more equal than other consensus mechanisms, but more efficient and faster as well. Bitcoin can take hours or even days to complete a transaction. BitShares completes transactions in an average of 1.5 per seconds and BEOS operates with half-second block times. Thus, SovereignSky's BEOS blockchain plans to operate in near real-time, unlike many of the others even BTC and ETH

Nodes

Signing nodes are responsible for the decentralized integrity of the integrated BitShares and BEOS blockchains. They are elected by the blockchain's base token holders. Space, sea, and ground based hardware will likely be provided by SovereignSky to those who get elected to operate them.

Enterprise nodes are processors that perform BEOS-extending functions (e.g. mining, interfacing, escrow, smart contracts, etc.) in the sovereignty of space, or at sea in international waters, and thereby produce revenue for their owners. SovereignSky plans to grow to a total of 63 of these nodes over time. The actual number of total Enterprise nodes may vary due to several factors, including the number of satellites and space borne processors available to SovereignSky as the platform plans to grow and evolve. Please see: Page 49.

Identity and Permission

Similar to most blockchain protocols, the SovereignSky blockchain plans to use public/private key cryptography to solve the problem of access and permission. However, in contrast to other blockchains, its permission policy targets to not be cryptography-based but account-based: every account will hopefully be controlled by a weighted combination of other accounts, i.e., keys. In this scheme, each public/private key pair is assigned a weight, and once the combined weight of key pairs exceed a certain value, permission to access the account and execute transactions is granted. Usability of this protocol plans to be further enhanced by having active keys for everyday use, and owner keys which may serve to restore access as a backup.

Usability

Developers building Dapps for the SovereignSky platform may do so with a user-friendly and accessible web toolkit and a fully-serviced framework provided by the well-funded developers of EOS.IO. Important and frequently used functions such as those for account administration, permissioning and communication, are part of the framework to allow for efficient development in high-level languages.

Coming Advanced Features

The SovereignSky BEOS network plans to make BitShares smart coin factory tokens portable across the family of EOS powered blockchains. Each node aspires to log its GPS location at every block and only execute transactions that are allowed in its jurisdiction. Nodes located on moving platforms such as cruise ships will execute smart contracts in international waters but not when the ship is docked in a port with unfavorable regulations affecting those contracts.

SovereignSky Specifications: Hardware

Ground-based Mesh Network

The earth-bound part of the SovereignSky network and platform is a truly distributed mesh blockchain network, which is extremely resistant towards failure of single nodes and towards malicious attacks due to its architecture (see figure **opposite).**

Distributed mesh blockchain network
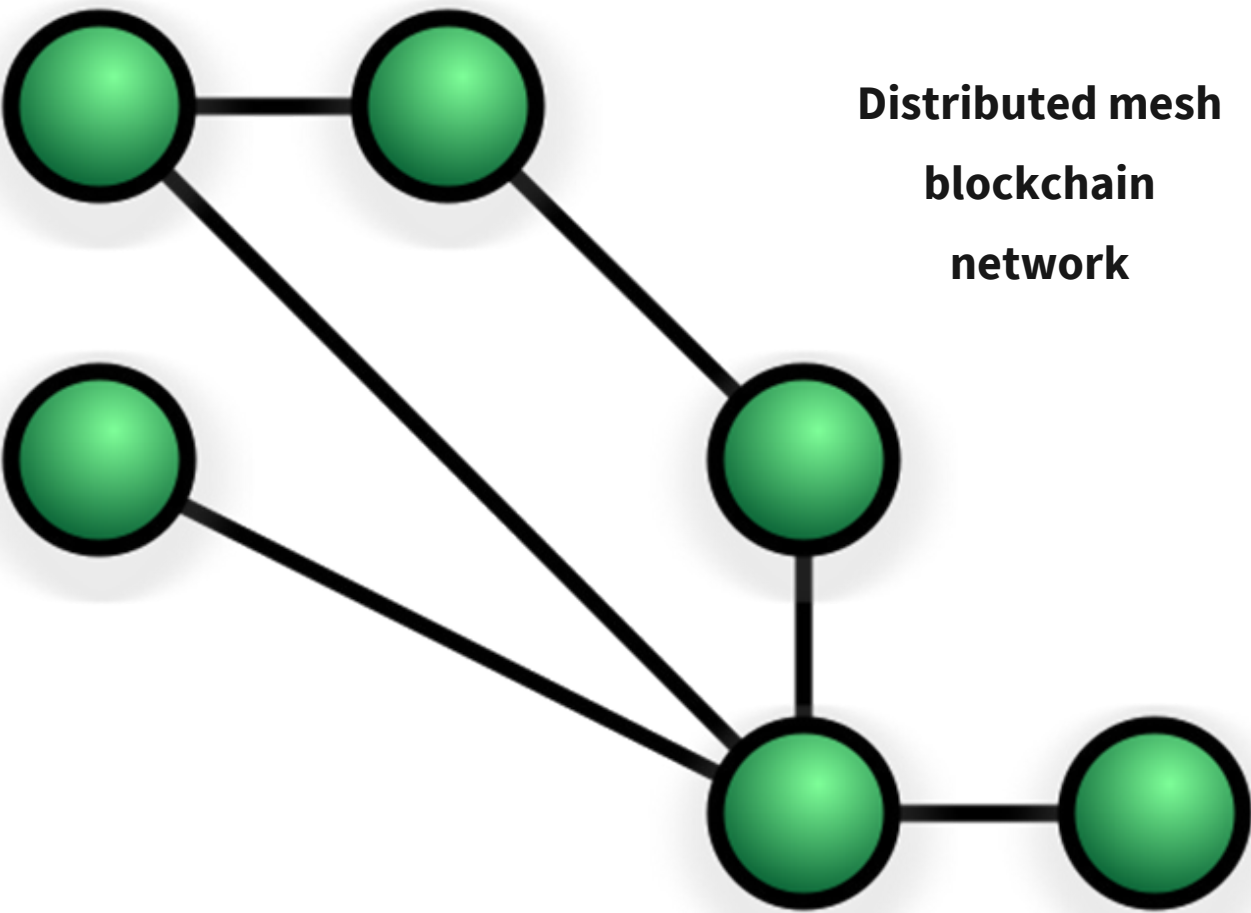
The network wishes to be propagated with specialized antennas, made available to the population by SovereignSky.

Cube Satellites and Ground Stations

A mesh network alone cannot be the solution to the challenges outlined above: it is to subject national regulations, and its range is limited by geophysical features. Therefore, a crucial element of the SovereignSky ecosystem plans to be its satellites, developed and deployed by SpaceQuest, Ltd. (see Partner section below).

Stan Larimer presenting one of SovereignSky's future eco-satellites opposite. The earth-bound network, which plans to take SovereignSky transaction through the last mile to the user and customer, is connected to the satellite network through ground stations, which are deployed and maintained by SovereignSky and its local and regional partners. Find the Nodes on Page 50.

By connecting satellites to custom inexpensive user terminals, the final step of completing the initial equatorial constellation of **8 green satellites** with crosslinks along with adapting a standard smart phone to communicate with the satellites will be attained via the SovereignSky solar connectivity boxes.

75% of all Blockchain traffic touches a creation by the Larimer name.

SovereignSky equatorial launch of 8 Eco-friendly, solar-powered SmallSats.

In 2022, SovereignSky plans to employ 8 SmallSats with its trusted partner SpaceQuest and Spaceflight Industries and/or Zero 2 Infinity.

SovereignSky will use **two** possible methods of launching these 8 green blockchain satellites:

1) The first being Spaceflight Industries' SSO-A SmallSat Express which was launched in December 2018 aboard a SpaceX Falcon 9 out of Vandenberg Air Force Base in California.

SSO-A
SmallSat Express

Size of the SmallSat Express (human for scale)

SmallSat Express is needed to accommodate the growing number of customers seeking affordable rideshare options to launch their spacecraft into orbit, it's also an historic launch: it's the largest single rideshare mission from a US-based launch vehicle to date.

2) The use of the most cost effective and environmentally friendly balloon orbits via **Zero 2 Infinity.**

- **https://en.wikipedia.org/wiki/Zero_2_Infinity**
- **https://www.zero2infinity.space**
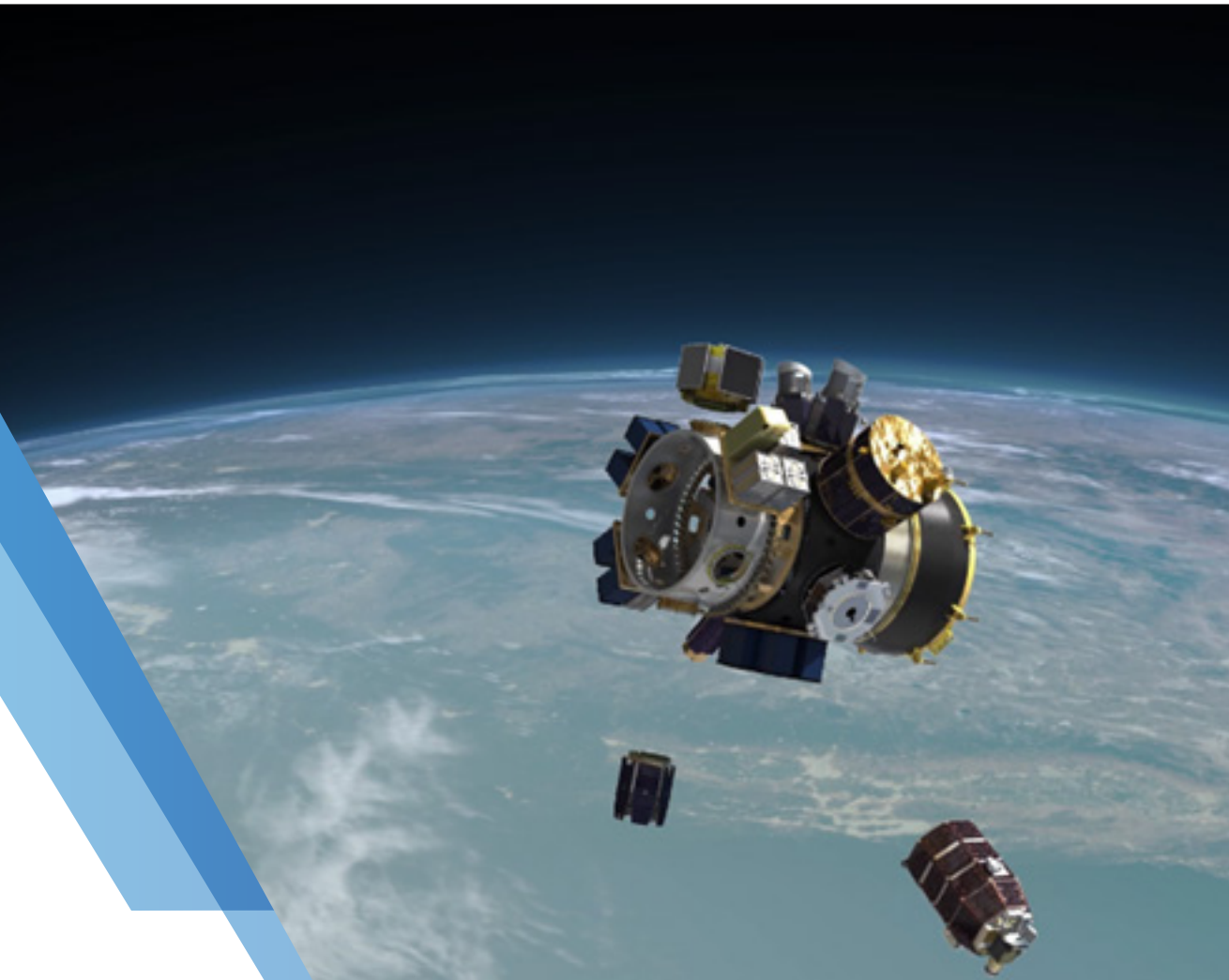
Deployment of micro and nanosats from SpaceX and the SmallSat Express

Spaceflight has contracted with more than 70 spacecraft from approximately 35 different organizations for the mission to a Sun-Synchronous Low Earth Orbit. It includes 15 microsats and 56 cubesats from both commercial and government entities, of which more than 30 are from international organizations from 18 countries, including United States, Australia, Italy, Netherlands, Finland, South Korea, Spain, Switzerland, UK, Germany, Jordan.
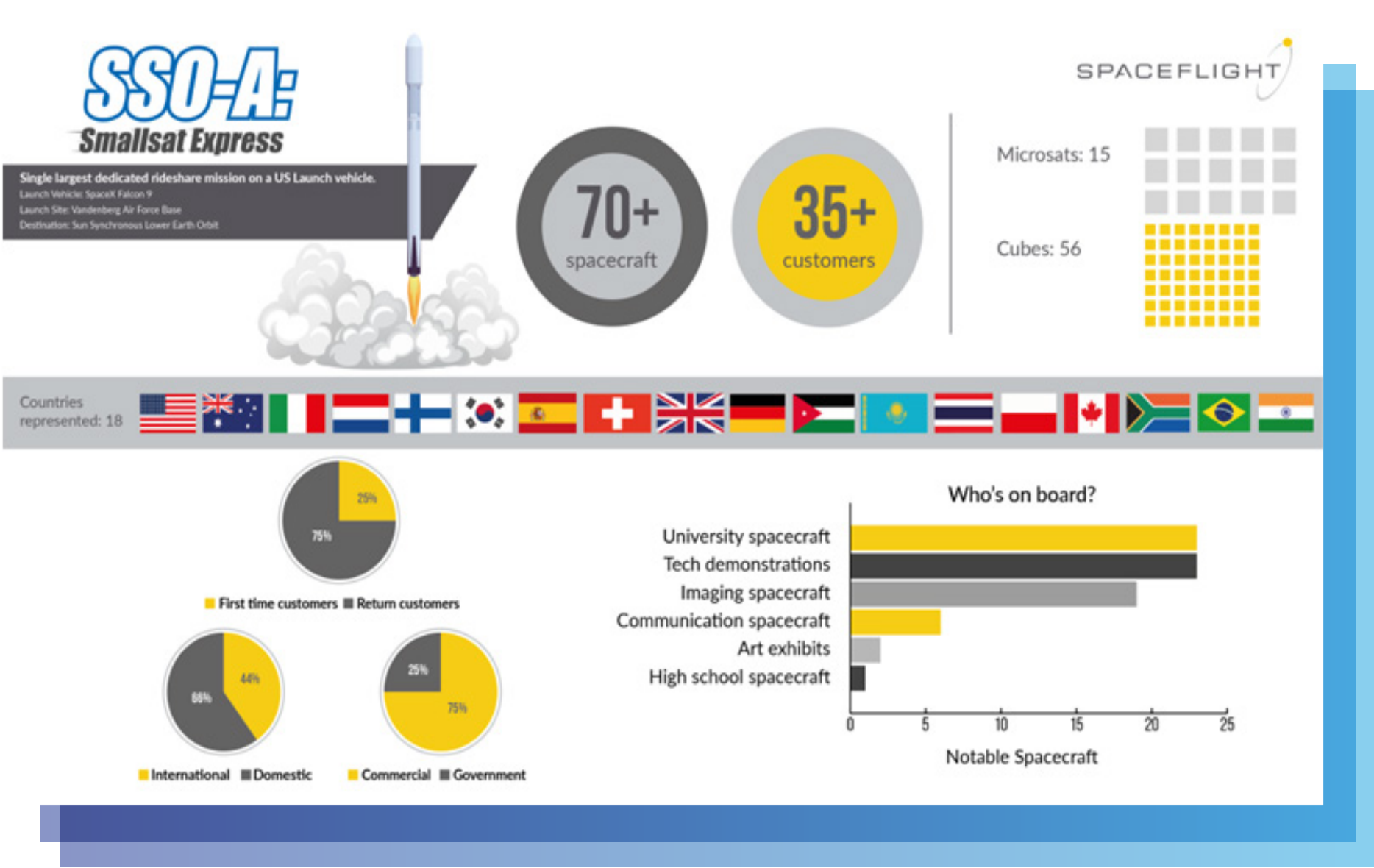
Stan Larimer's SovereignSky, SpaceQuest & RUON AI signs one of the first-ever, eco-friendly blockchain transactions in space.

RUON AI · Dec 31, 2019 · 6 min read

The second option is SovereignSky investing in the most cost effective and environmentally friendly balloon orbits via **Zero 2 Infinity.**

Zero 2 infinity unveils its plans for a Balloon-powered space flight
The first tourism pod of its kind in Europe.

The Day Trip of a Lifetime | Bloon by Zero 2 Infinity

Watch later   Share

MORE VIDEOS

0:40 / 1:00   YouTube

6. SovereignSky Space Blockchain Network

The overarching goal of SovereignSky is to create a satellite network that will deliver not only blockchain connectivity, but, direct access to an extremely powerful blockchain network to the majority of people in Africa, India, South America, parts of Asia and in the long-term to developed countries as well. This will hopefully enable Sovereign's electronic currency to be sent to RUON enabled android phones distributed to regions in need. Recipients, charities, orphanages and people in need using the RUON app (and smart phones contained within the solar connectivity boxes) will be able to gain direct access to a network, connected to the developed world, that gives them vast opportunities for entrepreneurial action. The space segment of the SovereignSky program plans to be developed and deployed in eight (8) phases.

Phase 1: Completed: Ground-based BEOS tested & operational

BEOS, the EOS forked green blockchain, is currently operational on the ground and with nodes being installed on cruise liners to working in international waters. BEOS has now been successfully stripped down to work on satellites. This eco-friendly blockchain is now ready to be pre-installed on 8 solar powered blockchain satellites which SovereignSky is looking to acquire, with absolute minimal energy consumption & carbon emissions. Please read more from co-founder Stan Larimer on Steemit on how our solar-powered blockchain works. All testing has now been completed to port the current blockchain software to flight processor hardware that can be used in space. This has been done to confirm the technical approach, power consumption, computer processing requirement and communication parameters needed in space. The ground blockchain processor has been successfully be configured as an operational blockchain 'node in space'.

BEOS Transactions in International Waters
https://steemit.com/bitshares/@stan/beos-transactions-in-international-waters

BEOS Completes Its First Trans-Pacific Journey
https://steemit.com/bitshares/@stan/beos-completes-its-first-trans-pacific-journey

Dan Larimer spoke in DC at The Future of Money, Governance, and Law Conference https://steemit.com/bitshares/@stan/dan-larimer-spoke-in-dc-this-week

Phase 2: Completed. Upload the blockchain software to SovereignSky parter SpaceQuest's satellite called AprizeSat-5

AprizeSat-5 is currently an orbiting satellite to validate operation of a blockchain node in space and to implement the necessary ground station antennas and software to be able to send and process transactions in space. This critical step will insure that the deployment of a constellation of 8 green blockchain satellites to be successful. Once we are confident that the satellite and on-board flight processor (managed by SpaceQuest) can successfully execute the world's first blockchain transaction in space, we will be able to move into the next program phase.

Phase 3. Completed. First blockchain transaction processed in Space by a western company.

On 13th December, 2020, SovereignSky and SpaceQuest process one of the world's first ever blockchain transactions in space (please see Medium & press articles). The aerospace and technology teams uploaded part of its eco-friendly EOS hybrid blockchain, stripped down and designed to work in space, to SpaceQuest's AprizeSat-5 satellite. SovereignSky will now look to pre-load up to 8 cubsats satellites, similar to the "THEA" with its eco-friendly, green blockchain to work in harmony across its satellite constellation and down to earth ground-stations and portable D2C solar connectivity boxes. Indevelopment. BEOS Spacedrop - Manna from Heaven Here's how it works (when ready this summer). Each time our SpaceQuest satellite passes over our ground station in Alaska it will download Manna tokens to the BEOS wallets of all who are holding BTS and BEOS on the BEOS network.

Phase 4. Ongoing - 2023. Solar Connectivity Boxes for People in Need

SovereignSky is a conduit for RUON AI's ability to reach charitable organizations, villages and orphanages, in the under developed world. SovereignSky's 'Solar Connectivity Boxes' will include small portable modems which connect to the satellites and cheap android phones with the RUON App & digital wallet and connected smart debit card. Allowing people in extreme need to receive direct charity donations from the developed without any other other infrastructure (including wi-fi or even power). People and organizations on the charity profile pages on RUON can instantly be sent money from the developed world in one of the most efficient and effective donation processes ever created. Donors can see pictures and videos of the positive effects their donation has made and even communicate directly with the donees, happy in the knowledge that up to 97.5% of their donation has gone directly to the person in need via SovereignSky, all in a matter of a few minutes.

SovereignSky Space Deployment Phases

Phase 5: Estimated end 2021. SovereignSky's Partner, RUON.AI Mobile Application

RUON AI will aim to provide social charity profile pages with digital wallets so unbanked people in the poorest and remotest parts of the world can use and receive electronic currency donations from space. RUON AI is being designed to be the future of social media; a highly sophisticated social media, chat, business, charity and blockchain banking application for millennials, Generation Z, the mass market and the world's unbanked - where users in the developed world can donate to charitable organizations and people in need in the underdeveloped world.

Phase 6: Giving Value to BEOS Space Manna
https://steemit.com/bitshares/@stan/giving-value-to-beos-manna

Phase 7. Ongoing. SovereignSky a solar-powered blockchain. Please see overleaf.

Phase 8: 2022 - 2025. Equatorial orbit launch of 8 green satellites for a near indestructible banking system in Space.

The target is now to fund, acquire, launch and deploy 8 green blockchain satellites pre-installed with the SovereignSky blockchain. Over the next 5 years SovereignSky aims to launch more satellites (polar to polar orbit) to connect with the first 8 satellites on an equatorial orbit. Once finished we aim to cover part of the developed world with a secure blockchain network and 'a near indestructible, Eco-friendly DEFI banking system in space, powered entirely by solar power and with near zero carbon emissions! '

The goal is to create a future-proof blockchain financial system with global space-based currencies invulnerable to the effects of war, conflict, solar flares, meteors, global catastrophes, cyclones, financial collapse and other catastrophic events on Earth.

https://steemit.com/bitshares/@stan/beos-on-sovereignsky-the-green-alternative-to-bitcoin-and-ethereum

Portable mini modems

In parallel with the satellite and space-based blockchain development and a key feature of the project, is the development and testing of a portable satellite modem (being developed by a 3rd party) that communicates with the android phones and can relay the transaction information to and from the blockchain nodes in space. The ground segment plans to shrink from a fixed, centrally-located Antenna Node to a hand-held, portable satellite mini modem, about the size of a smart phone, similar to the one shown above. Once the smart phone application and compact modem are tested and certified, SovereignSky clients will be able to execute a blockchain transaction via satellite from any place on or near the equatorial belt. The phones will connect to the mini modem via Bluetooth or wi-fi. The only requirement is that the small satellite modems have clear access to the sky. These satellite modems can be shared by multiple users who are in the general vicinity and have the appropriate login credentials.
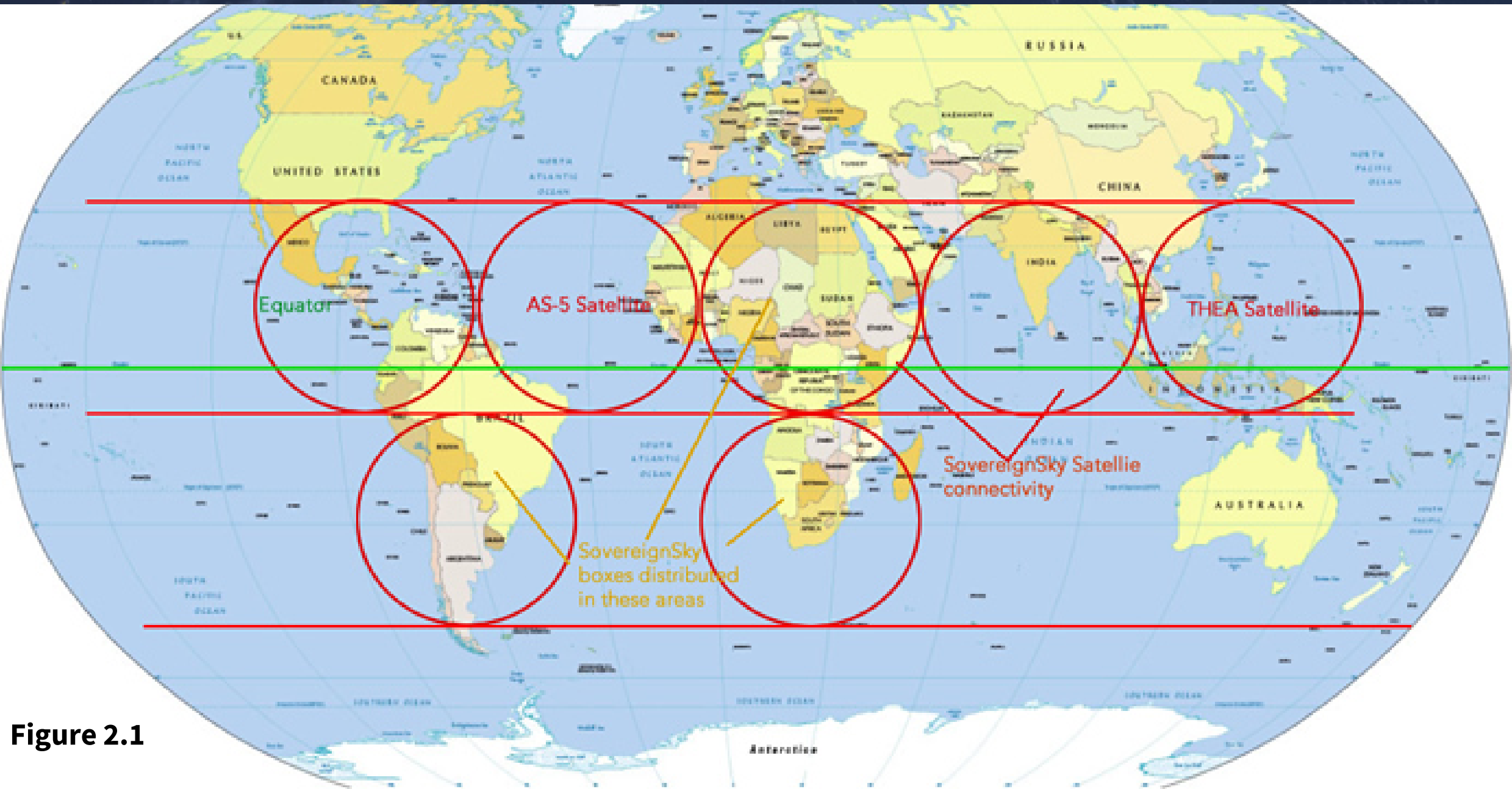

Figure 2.1

Figure 2.1 Opposite shows the range of connectivity SpaceQuest's satellites can provide.

When SovereignSky's own satellites launch concept is to donate boxes in these areas so people in need around the equator can get connectivity.

Phase 7. Solar powered Blockchain in Space

Today's satellites are frugal with power, which is usually supplied by arrays of solar cells. A typical communications satellite needs between 1 and 1.5 kilowatts of electricity, and the space shuttle manages on 12.5 kilowatts.

Tiangong 2 was built in Beijing Space City and launched on 15th September, 2015 from the Jiuguan Satellite Launch Centre aboard a Long March 2 rocket [1].

Its solar panels were folded up for launch and then deployed once the spacecraft was in orbit. Two wings extend from either side of the spacecraft [2]. Each wing is comprised of four solar panels made up of gallium-arsenide solar cells. Each wing has an area of around 30 m2, so the total area of the solar generating panels is equivalent to about two thirds of the goal area on a soccer pitch. The panels can be tilted to present the maximum possible area to the sun.

The power generated by a solar panel is directly proportional to the intensity of sunlight falling on it, so it makes sense to maximise that area by tilting the panels to be as close as possible to perpendicular to the sun. The panels can generate up to 6 kW of DC power when fully illuminated. Power is generated at 100 V and then stepped-down to 28 V and 12 V with DC-DC converters to power the various sub-systems and equipment within the laboratory.

GOMspace | SpaceQuest places order for ...
gomspace.com

RBC Signals Engaged by SpaceQuest to ...
rbcsignals.com

Over the course of one orbit, the average power generated a little less than half of the maximum value, around 2.5 kW. The spacecraft must spend some part of its orbit in the Earth's shadow, and for that time there will be no solar generation. So a considerable proportion of the generated electricity must be stored in batteries. These batteries are 40 Amp-hour nickel-metal hydride units.

		Power (W) each	Number Active	Orbit Avg Duty Cycle (%)	Watts	Eclipse Avg Duty Cycle in Eclipse (%)	Watts
PAYLOAD							
	Payload	2.1	1	100	2.1	100	2.1
				Total	2.1	Total	2.1
PLATFORM SUB-SYSTEMS							
Communications							
	UHF TX	1.9	1	10	0.2	10	0.2
	VHF RX	0.15	1	100	0.2	100	0.2
ADCS							
	ADCS Board	0.1	1	100	0.1	100	0.1
	Magnetorquers	0.1	1	2	0.0	2	0.0
	Sensors	0.01	1	100	0.0	100	0.0
On-Board Data Handling							
	OBC	0.25	1	100	0.3	100	0.3
Thermal Control System							
	Battery Heaters	2	1	0	0.0	0	0.0
Power							
	Power System Electronics	0.05	1	100	0.1	100	0.1
Platform Subtotal					0.8		0.8
Margin (positive and negative)					49%		20%
				Total	3.4	Total	3.4

Let's think about what 2.5 kW of generated power actually means. A desk top computer back at mission control might consume 250 W of power, that's one tenth of the average power generated in one orbit.

Assuming that a 250W processor has enough horsepower to operate one of our BEOS nodes, we should have enough.power on a satellite the size of Tiangong 2 to operate up to 8 nodes with 500 watts left over for housekeeping systems.

Or if we only put one node per satellite, we could get by with 8 times smaller solar array than Tiangong 2. A full blockchain would require 21 nodes, or 5250 watts of power.

Cubesats have much less power - only 2.1 watts to run our single processor payload. This is probably too small for our application.

Ground Based Solutions

The average home in the U.S. uses 10,400 kWh of electricity per year. If you install the average 250-watt solar panel, you'd need around 28-34 solar panels to generate enough energy to power your entire home. At 250 watts per processing node, a solar panel system sized to power one home could power 40 processors or enough for two complete BEOS blockchains.

BEOS nodes located in separate locations could be powered with just two solar panels per node or a single home sized array could sell it's power into the grid to offset all 42 nodes drawing from the grid anywhere in the world.

A small windmill generator puts out 1 megawatt of power into the grid, which would offset the power requirements of 200 BEOS blockchains.

Phase 8. SOVEREIGNSKY: The funding, launch and deployment of 8 eco-friendly, solar-powered blockchain SmallSats.

**SovereignSky and SpaceQuest are now ready for Phase 8:**

"The launch of of all eight eco-friendly blockchain satellites on a single dedicated launch mission. This would provide continuous satellite coverage along the equatorial belt using inter-satellite crosslinks and 3 ground stations located near the equator".

Spearheaded by ex nasa Co-founder; **Stan Larimer,** SpaceQuest Chairman & CEO **Dino Lorenzini a**nd Digital Hollywood Host and sci-fi writer and producer; **Timothy E. Burke**

These 8 eco-friendly CubeSats pre-loaded with the SovereignSky blockchain on the ground, powers the "Sovereign" space-based cryptocurrency, will be launched into an equatorial orbit, where each satellite will circle the Earth's Equator every 100 minutes. As a result, all of the regions highlighted on the map below will have access to a SovereignSky satellite connection continuously.
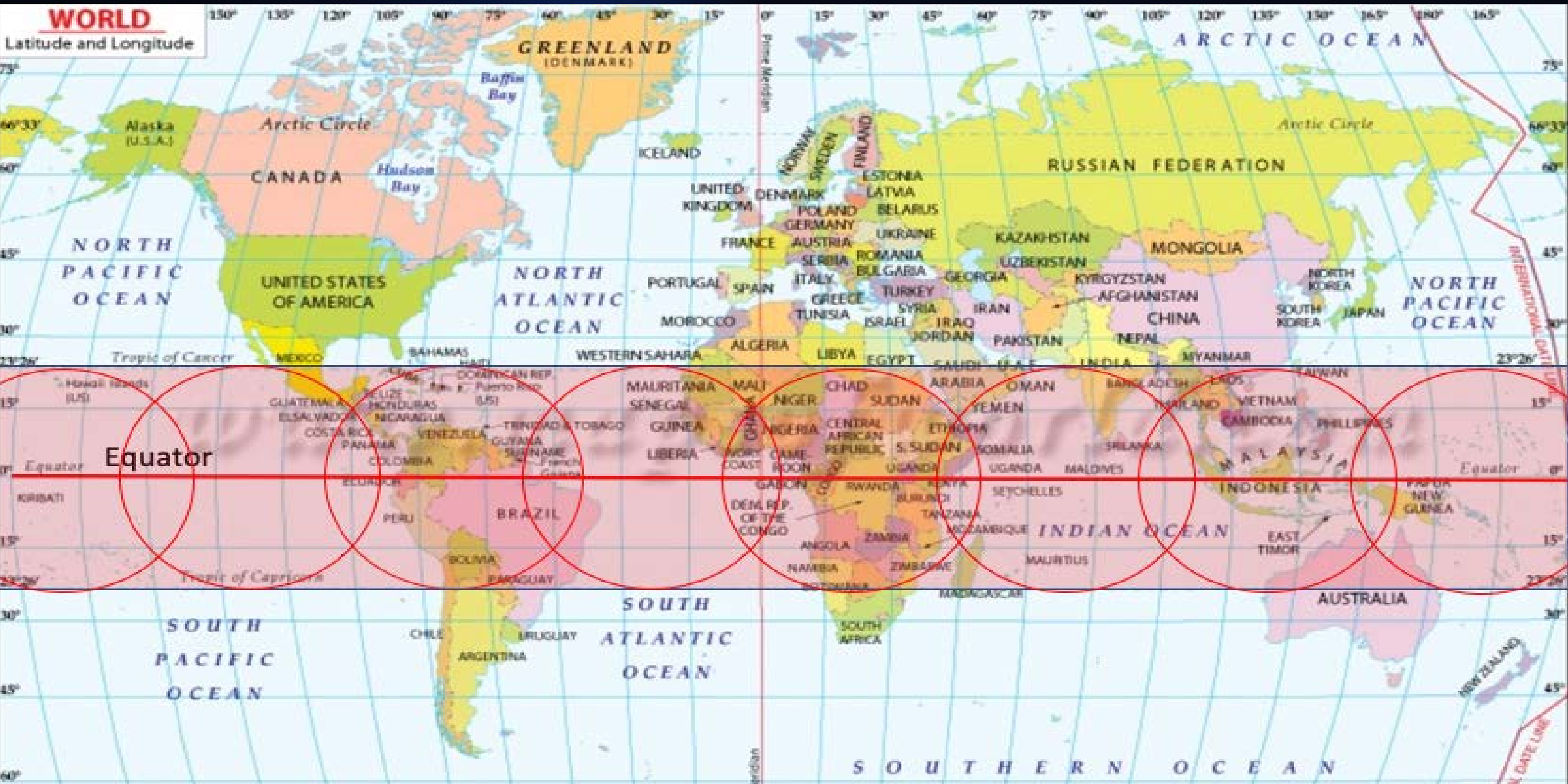
Phase 8: 3rd World Connectivity

The red circle areas, above, show the ground coverage of each satellite as it travels over the Equator from west to east. 'Ground Segment Antenna' nodes deployed in central Africa aspire to provide reliable and secure direct access to the SovereignSky satellites. The satellites contain crosslink communication radios that will allow them to share all transaction information with neighboring satellites. All 8 eco-satellites plan to process and store the transaction data.

Initial operations plan to be carried out using local Antenna nodes that comprise a satellite antenna, software-defined radio modem, a power amplifier and a computer server. SovereignSky customers will be able to log into a nearby Antenna Node via wi-fi to conduct a financial business transaction or directly by using their smart phone and portable modem (currently in development) with the RUON Application.

The transaction data will be sent to the SovereignSky satellites as they pass over the Antenna nodes, and relayed to the other ground Antenna nodes. These Antenna nodes can be deployed in other locations in South America and Southeast Asia to extend network coverage to clients in other Asian nations.

This satellite configuration seeks to ensure complete continuous satellite coverage to the poorest people in the world who will benefit the most from secure blockchain transactions. At least three master antenna nodes are scheduled to be deployed in non-jurisdictional locations to command, control and maintain the satellites in orbit. An archival copy of all satellite blockchain transaction plan to be stored at these locations to insure that no client data is ever compromised or lost.

Phase 9: Global Connectivity

The SovereignSky satellite constellation plans to be expanded to cover the globe as shown here. The size of these initial satellites plan to be increased to a 6U design to accommodate additional satellitebattery and processing power, satellite crosslink communication radios and antennas, advanced computer processors, and a small propulsion system to handle data transactions on a global scale.
6U CubeSat structure may be similar to that shown below:
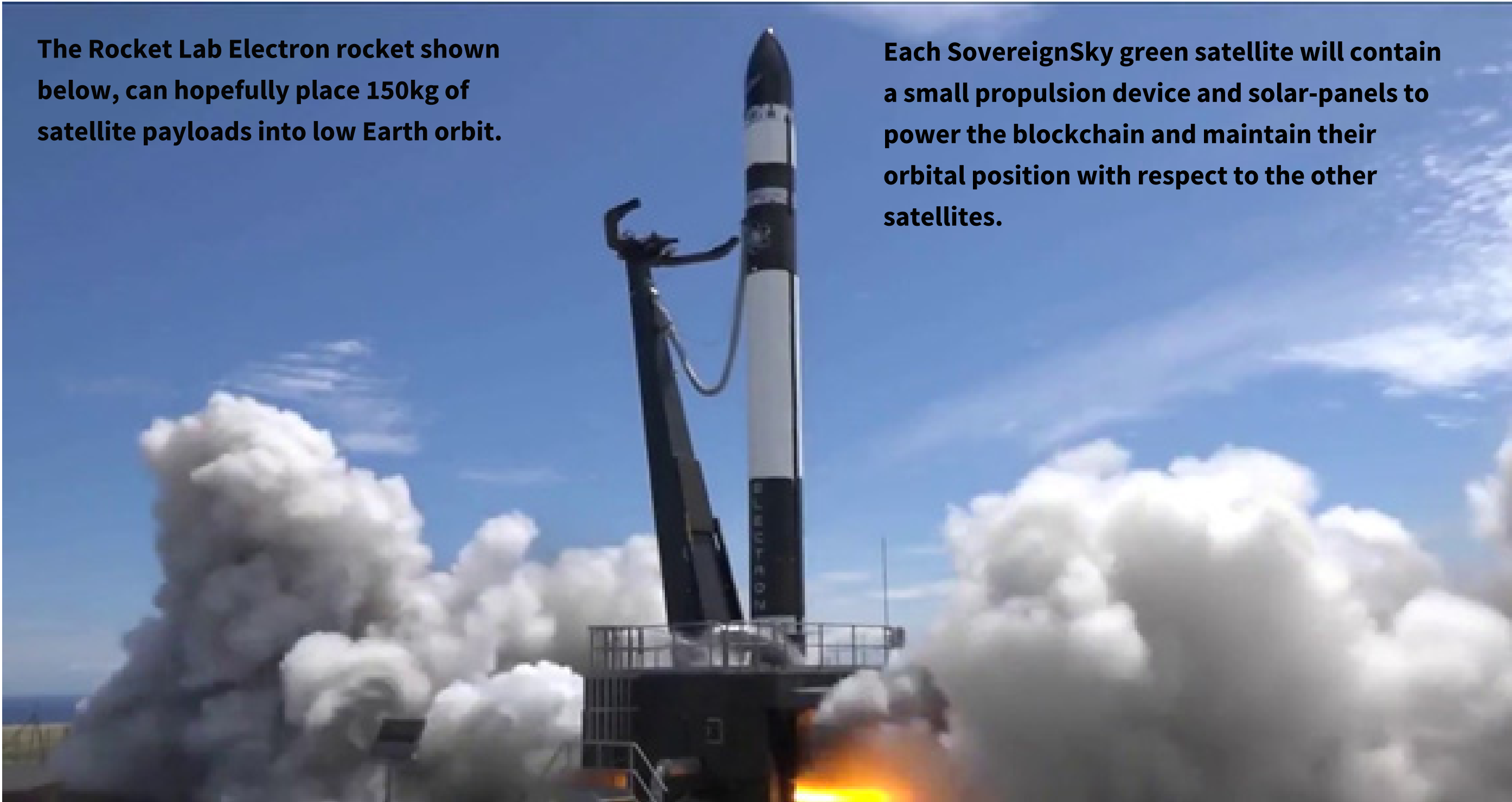
The Rocket Lab Electron rocket shown below, can hopefully place 150kg of satellite payloads into low Earth orbit.

Each SovereignSky green satellite will contain a small propulsion device and solar-panels to power the blockchain and maintain their orbital position with respect to the other satellites.
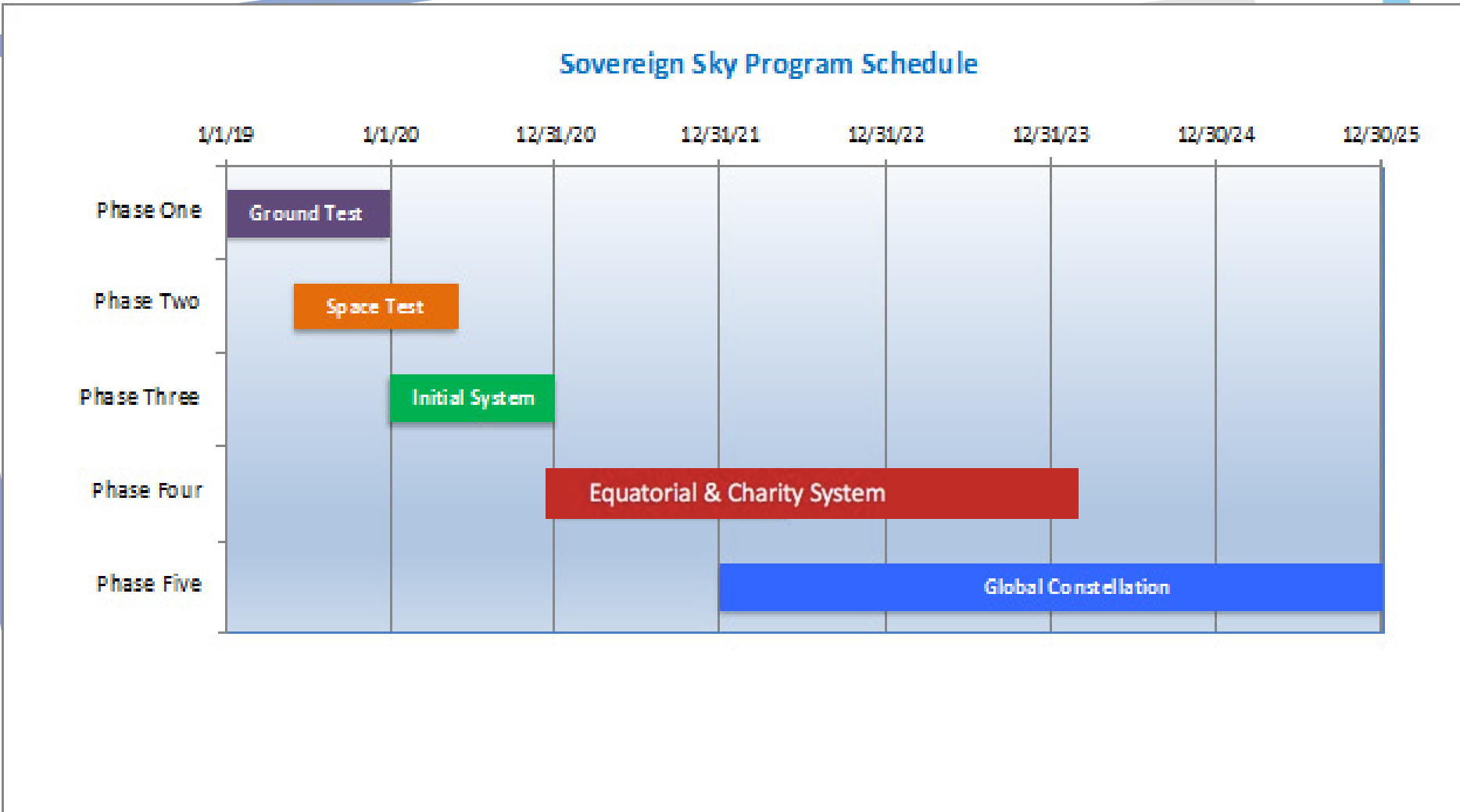
SovereignSky Space Program Schedule

The overall SovereignSky technology development and program deployment schedule is shown in the chart below. RUON Inc. and SovereignSky are now ready to acquire the 8 green satellites following an operational ground blockchain (BEOS) and the **'first blockchain transaction in Space'** by SpaceQuest after porting SovereignSky blockchain software to one of its existing CubeSats in orbit. This important proof of concept and feasibility demonstration is essential to the Phase 8 and the initial SovereignSky satellite space constellation, which will take roughly **18-months from June 2021, after funding to acquire, modify, test load & launch.**

Depending on the success and growth of the customer base, SovereignSky plans to begin the deployment of a full global constellation in 2024/5 onwards and when this expansion is fully funded.

This space infrastructure will permit full-time connections to the satellite network everywhere in the world at any time. The timing and extent of Phase 9 implementation will depend on sizable financial backing.

In summary, SovereignSky wishes to develop and perfect the space infrastructure and personal user modems needed to create a global blockchain network that provides a universal digital currency exchange for everyone on Earth, which anyone can build and run fast Dapps on but most importantly designed to help others.

Sovereign Sky Program Schedule

	1/1/19	1/1/20	12/31/20	12/31/21	12/31/22	12/31/23	12/30/24	12/30/25
Phase One	Ground Test							
Phase Two		Space Test						
Phase Three			Initial System					
Phase Four				Equatorial & Charity System				
Phase Five						Global Constellation		

Partners

SovereignSky is proud to announce its partnership with SpaceQuest, Ltd. (www.spacequest.com), the pioneering company in the field of advanced satellite and spacecraft technology, in particular micro-satellites. SpaceQuest specializes in the design, development, testing and manufacture of spacecraft and ground components for operation with low-Earth orbiting satellites.


Over the last 20 years, the SpaceQuest team have successfully built and flown 18 satellites on 9 launch campaigns. Their micro-satellite bus has flown 15 times in academic, commercial, and government projects. Thus, they are uniquely suited to providing the technological basis for the revolutionary infrastructure and platform of SovereignSky.

8. The Sovereign Currency (Coin)

Token Pricing and Market Capitalization: Explanatory Notes Prepared by ARQ Economic & Business Intelligence Ltd.

Introduction

The purpose of this section is to provide direction on key metrics related to the SovereignCoin, including token economics, market capitalization and quantity of tokens issued. This document will also outline the methodology and conceptual approach behind the metrics, as well as potential scenarios based on different market realizations. The aim is to develop a flexible and transparent framework to facilitate understanding of the tokenomics behind the numbers to enable SovereignCoin to fully capitalize on the opportunities of space-based blockchain technologies.
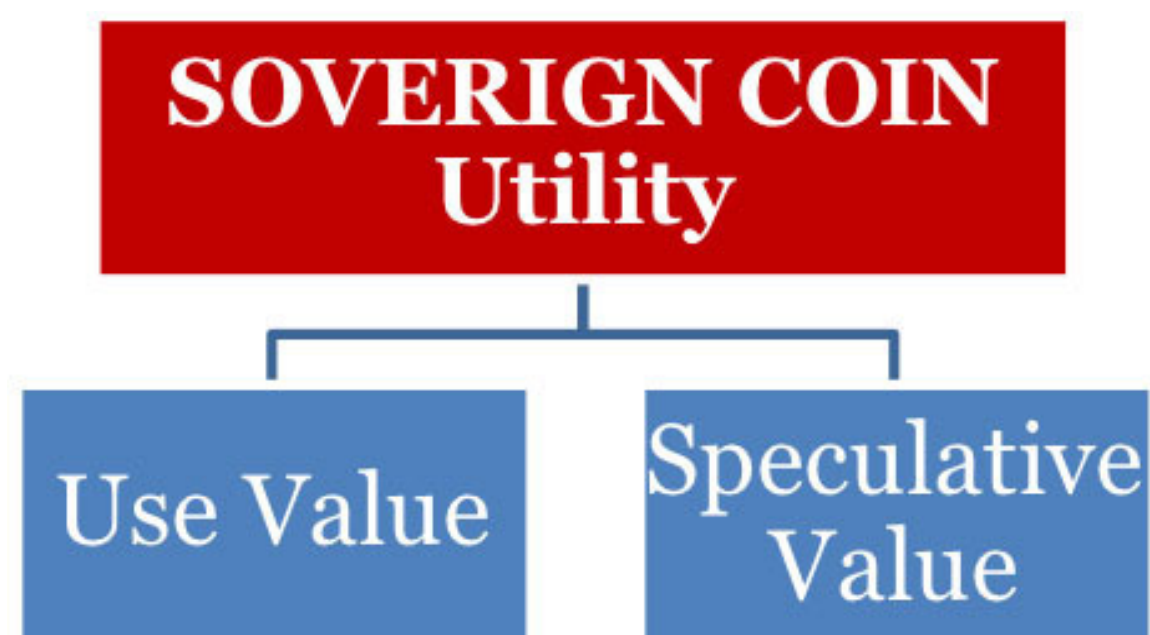
We denote this as the "Dual Utility Principle" and is key to our understanding of how value is derived from tokens and thus the appropriate pricing/market capitalization to assign. Use value is the value obtained from using the token as a medium of exchange, in order to obtain goods or services that satisfy human needs or wants. In this regard, the token behaves exactly as any global currency, and indeed any form of money as defined by Laidler (1985). On the other hand, speculative value is the utility obtained from the token as an investment product or asset, which in turn is based on the (expected) returns derived from the asset as its market value increases over time (Merton, 1973). In this instance, speculative value would be derived as SovereignCoin's price relative to other electronic currency or fiat money increases, resulting in increased token-holder wealth.

These two sources of utility are often ignored when calculating the various token metrics, in favour of a single approach that typically focuses on speculative value. Each value has its own drivers and market levers which in turn will affect the SovereignCoin's desirability and hence price/market cap in different ways. By considering the two in tandem, together with the underlying micro-economics that govern each type of value, the aim is to obtain token metrics that are more reflective of their true market fundamentals and value proposition. Thus, we can rewrite the Dual Utility Principle more compactly as:

$$U(\ SOVEREIGN\ )\ or\ \boxed{U(RUON) = f\{u_1(Use), u_2(Speculation)\}}$$

Throughout the rest of this document, for tractability we shall assume that preferences are stable, convex and continuous, and that the above utility function is quasi-concave in the quantity of tokens purchased. The total utility derived from SovereignCoin plans to thus govern the demand for SovereignCoin, in line with the neo-classical theory of demand (Samuelson, 1938). It therefore follows that there shall be two distinct strands of demand for SovereignCoin, namely demand to satisfy use values, and demand to satisfy speculative values. In broad terms, the determinants of demand for SovereignCoin in each case can be summarised as follows in Figure 2, below:


2.2 Use Demand

As seen above, use demand hinges on the value of the SovereignCoin economy, given that end-users will ultimately derive use value based on their ability to utilise the token to satisfy current and future needs or wants. Thus, apart from the existing value proposition of the SovereignCoin economy in terms of the goods and services that can be purchased, use demand also depends on consumers' perception regarding:

- The ability of SovereignCoin to maintain and continue to increase its value proposition;

- The stability of the SovereignCoin ecosystem from a technological perspective;

- The accessibility of the Sovereign Coin economy;

- The risk that services may be discontinued in the future.

Thus, it is important to analyse each one of these factors in order to ascertain the total value of the Sovereign Coin economy to end-users. This is also important since this value plans to also have a bearing on the value of SovereignCoin, and thus future returns from a speculative perspective. Clearly, analysing the putative value of the SovereignCoin economy is fraught with difficulties and subjective assessments – an issue that has plagued economists for several years in different contexts (e.g. Hammond, 1998). Nonetheless, we have sought to develop a tractable, comprehensive framework in order to assess the overall value of the SovereignCoin economy based on a systematic assessment of SovereignCoin across various criteria.

Our approach to building a systematic assessment of the SovereignCoin ecosystem is to adopt a nested-environmental approach of the eco-system. We tackle various elements as we believe that the token lives and survives within a whole ecosystem which is tun determined by a number of different elements. These include:

🛰 **The total market**

🛰 **The SovereignCoin economy**

🛰 **The SovereignCoin token**

🛰 **The entity behind SovereignCoin.**
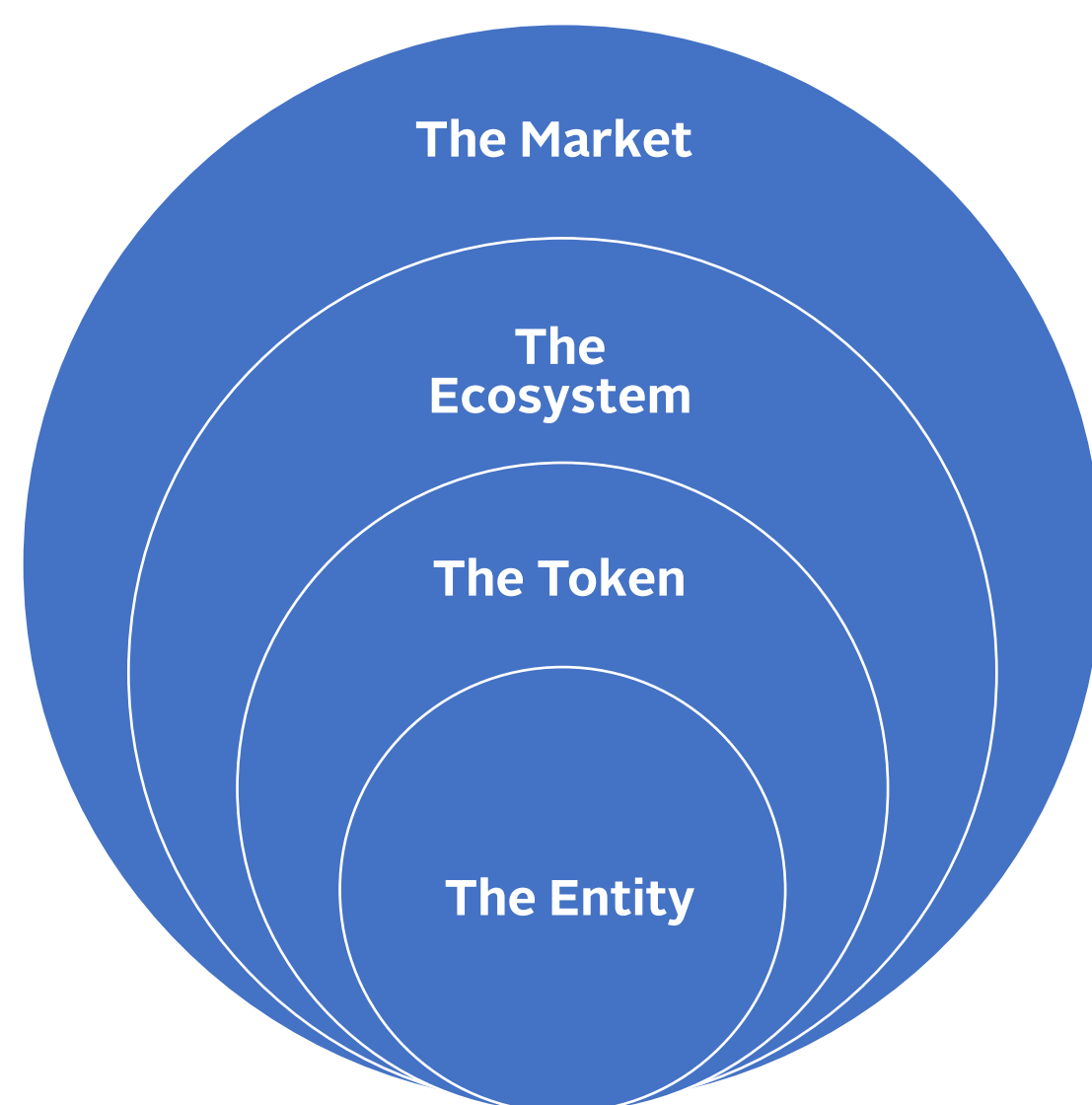
2.2.1 The total market

The market that SovereignCoin seeks to target is multiple. It is essentially a space-based satellite-powered blockchain system. This plans to target some of the main pain-points of existing systems. Using Porter's Five Forces we can say that there is currently very few companies in this sector which are planning to do a space-based blockchain system. The Sovereign system aspires to also look at facilitating international transfer payments through the use of the Sovereign satellites. **The market for peer-to-peer and big business, even in the future, small nation to nation global remittances** is growing and as more people join in the financial system through the use of blockchain, it is expected that the market for this type of service will continue to increase.

2.2.2 The SovereignCoin economy

The SovereignCoin economy plans to be made up of numerous users. The SovereignCoin seeks to facilitate a whole system composed of satellites, blockchain architecture, the RUON app users and Sovereign blockchain Dapp developers. Given that Sovereign is a platform, it is expected that a number of Dapps will also be created on other chains that can interface with Sovereign. We believe that having such a platform which intrinsically answers most of the pain points of the current blockchain platforms, will be a key element of the Sovereign economy.

2.2.3 The SovereignCoin token

The token that SovereignCoin is offering aspires to contain all the security features necessary to end itself as a robust technology and digital asset. Given the experience and system architecture we believe that the token itself reflects a very strong technological set-up and network.

2.2.4 The Entity

The project promoters have a demonstrated track record and experience in delivering various projects. There is a strong leadership and management team which is well placed to deliver business execution. Also, there is specific expertise to space and satellites to get this project through. There is also a clear strategy on delivering SovereignCoin and there has also been significant private investment. The entity is also actively seeking to be regulated which will provide the most holistic legal framework in this respect. From the analysis of use demand and a complete risk assessment, we believe that the SovereignCoin economy could offer great potential in this respect.

Key to these calculations is our estimate of the total value of the SovereignCoin economy (PY), based on the systematic assessment described in the previous section. This in turn hinges on the proportion of total charitable giving that hopes to be processed via the SovereignCoin system. We assume a velocity of money (v) equal to 1.5, which is comparable to other currencies and is considered to be reasonable given the patents pending, space history and unique nature of SovereignCoin Thus, we derive the following estimates for total market capitalization (M) using the Quantity Theory of Money (MV=PY):

📡 **The speculator's subjective assessment of the SovereignCoin economy;**

📡 **The expected returns derived from other comparable assets**

The first factor is practically identical to the one described earlier for use demand, and as such the framework developed therein shall also be used for this purpose. The second factor is related to the idea of optimal asset pricing in finance, whereby an investor will compare the risk-weighted returns derived from one asset against returns obtained from other assets within this class in order to determine whether to acquire the asset or not (Fama & French, 2004). In brief, a high-risk asset will require a larger return to induce investors to purchase it, while higher returns from competing assets within the same broad class will also require higher returns from the asset in question in order to remain competitive (Brennan, 1989). Therefore, the speculative demand for Sovereign Coin will incorporate both the systematic assessment of the value of the SovereignCoin economy and the comparative asset pricing element based on market returns and risk, based on the seminal capital asset pricing model (e.g. Perold, 2004).

The next step is to calculate the issue price per SovereignCoin (in US$) together with the total quantity of tokens to be issued. In addition to using our estimates for the total value of the SovereignCoin economy and market capitalization as key inputs, these figures also rely heavily on average market returns for electronic currencies well as returns from riskless assets, since these constitute competing investment products from a speculative perspective. An analysis of current electronic currency returns suggests that the average rate of return over the last 6 months for electronic currency of comparable utility is equal to 3.5% (Bayati, 2018). Similarly, if we consider U.S. Federal Reserve Treasury Bills as our risk-free asset, average returns from these securities over the last 6 months is equal to 2.15% (Federal Reserve, 2018). On the basis of these values, we can derive our estimates for the price per token and total token quantity under each of the three scenarios introduced earlier:

SovereignCoin plans to be created to handle large-scale transactions in the hundreds of millions from pension funds to hedge funds and central bank payment solutions and a currency which a national fiat currency could underline. The currency will specialize in large scale B2B transactions of the highest level, but will also provide a framework for person-to-person instant transactions.

2.3 Speculative Demand

Demand for financial assets is governed by a different set of propositions than use demand (Frankel & Engel, 1984), and is mainly driven by expected returns from the asset. In this case, given that SovereignCoin hopes to not be an interest or dividend-bearing asset, the expected returns from a speculative perspective would be derived entirely from expected increases in the price of SovereignCoin tokens over time, since token-holders would be able to sell their holdings at a higher price than that initially paid out. Thus, speculative demand for tokens will largely depend on two factors, namely:

- The speculator's subjective assessment of the SovereignCoin economy;

- The expected returns derived from other comparable assets

2.4 Market Capitalization and Token Pricing

Having determined the level of expected demand for SovereignCoin tokens based on the "Dual Utility Principle" we can now use this information to derive the putative price per token. This price will be equivalent to the equilibrium or market-clearing level whereby the demand for tokens will equal the supply of tokens. We start by first considering the supply of tokens. In this case, "the Quantity Theory of Money" (Friedman, 2017) specifies that money supply (M), which in this case translates to market capitalization, must be equal to the total value of goods and services produced within an economy at a given point in time (PY), divided by the velocity or speed at which money changes hands (V).

$$M = \frac{PY}{v}$$

Thus, in our case, PY is equivalent to the value of all revenue that SovereignCoin plans to generate within a given year, while v denotes the average number of times that SovereignCoin tokens are expected to change hands, which in turn is related to the number of SovereignCoin transactions. In turn, market capitalization M can also be expressed as the total quantity of tokens issued (S) multiplied by the price per token (T). Re-arranging the terms, we obtain:

$$S = \frac{M}{T}$$

For market clearing, demand must be equal to supply; therefore, we can find the token price (T) that leads to equilibrium in the market for tokens. Finally, given the above expression, we can derive the total number of tokens that should be issued (S).

Token Metrics

3.1 Estimates for Market Capitalization, Token Price and Quantity Issued

In the previous section, we sought to propose a simple, tractable framework rooted in micro-economic and finance theory in order to derive key token metrics that aspire to better reflect the utility derived from SovereignCoin tokens and market movements. We now turn to the actual calculations for the proposed market capitalization, token price and token quantity issued for Sovereign Coin.

Please contact us for **Sovereign token economics** and issuing.

Sovereign's infrastructure aspires to be an open protocol-Single Inter-Ledger Protocol (SLIP)-that brings new efficiency by enabling real-time settlement, ensuring transaction certainty and removing settlement risk, as well as data-rich messaging between all transacting parties-delivering a real-time payment experience to end users.

1.2 Sensitivity Analysis

In this section, we take a look at how shocks and movements to a number of key variables can influence our token metrics. The purpose of this analysis is to anticipate the likely impact of any future changes on the SovereignCoin token's value, which in turn can assist in devising appropriate responses to exploit any new opportunities while mitigating against possible threats or risks.

We start by considering the most fundamental relationship, namely that between the value of the SovereignCoin economy and the token price. As seen from Table 2, this relationship appears to be positive, with higher levels of value associated with higher token prices as both use and speculative demand increase.

Figure 3 below simulates this relationship over an interval of possible SovereignCoin economy values. As seen below, there is a logarithmic correlation between value and price, in that as the value of the economy increases, price per token will at first increase at a significant rate, before slowing down as the economy grows further, which is typical of most assets. This graph thus serves to highlight two important factors, namely that (a) there are diminishing returns from investing in improvements to the SovereignCoin ecosystem and value proposition as the economy grows; and (b) the SovereignCoin token will rapidly lose value eventually, if the underlying ecosystem and economy are allowed to fall unfettered in the absence of investment and good governance.
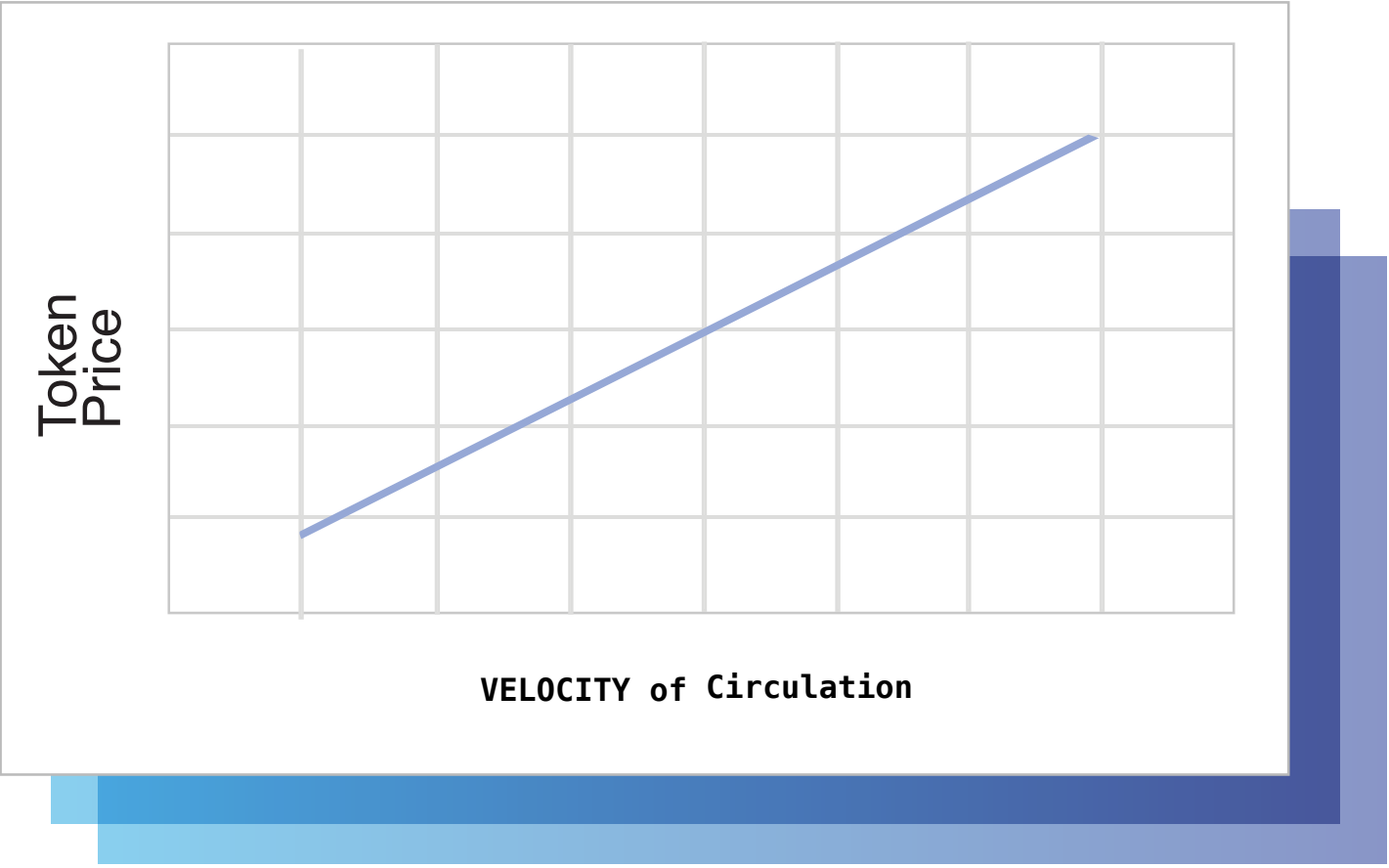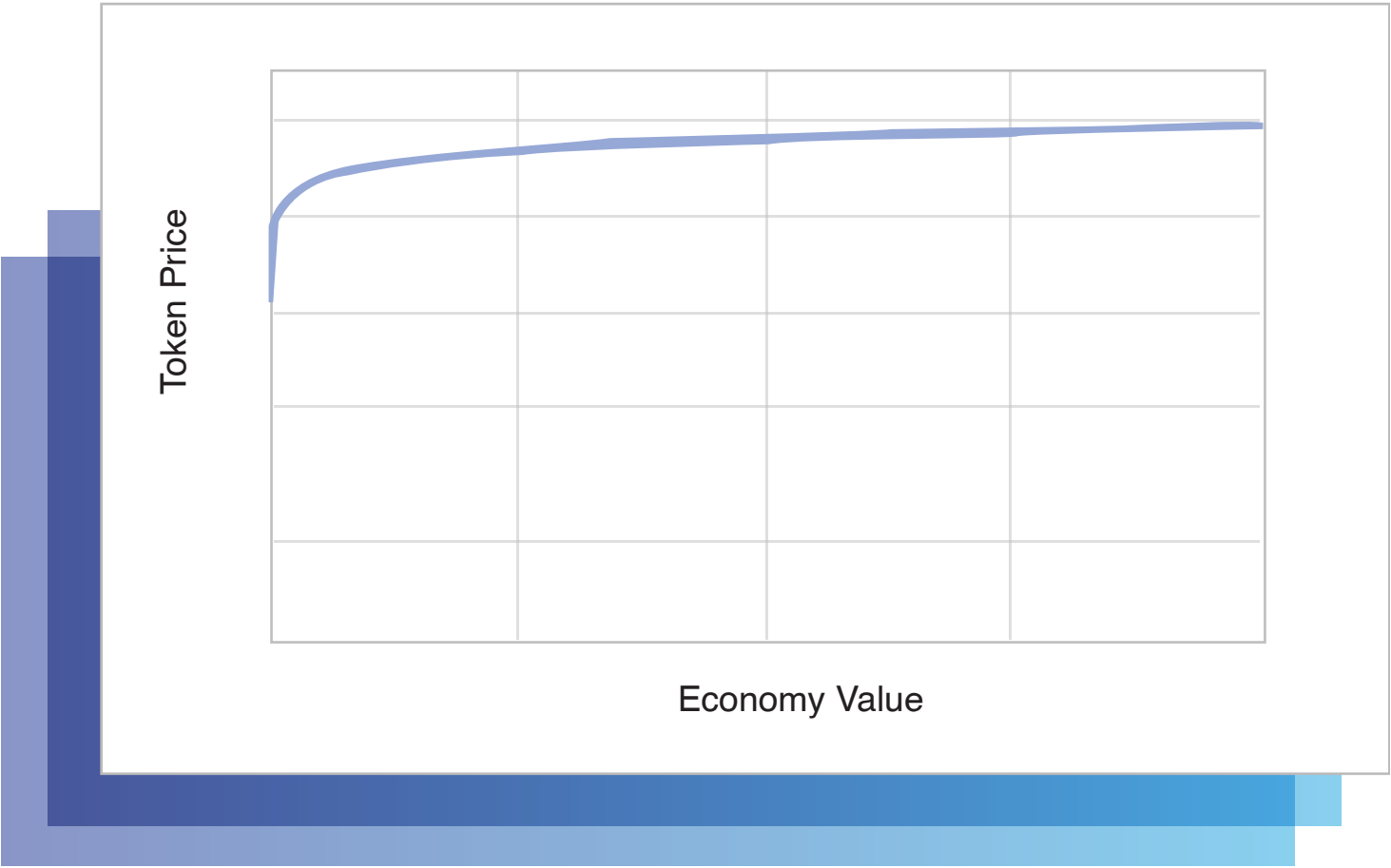
The second thing to consider is the sensitivity of token price to changes in the velocity of circulation (issuing), or the rate at which tokens change hands. This is important to analyse given that it is natural to expect that as the SovereignCoin platform gains traction and popularity, more and more people will start using the SovereignCoin tokens for a variety of transactions, thus increasing the velocity of circulation, which in turn may impact on the price per token. Figure 4 simulates the relationship between velocity and token price. As seen below, we find a linear positive correlation between the two, implying that as Sovereign Coin-based transactions increase, demand for Sovereign Coin will also increase, thus fuelling the increase in token price. This is, however, a double-edged sword, since just as increased velocity will lead to higher token prices, lower transaction volumes in Sovereign Coin will lead to a decrease in the price per token.

This analysis has sought to develop a tractable, robust framework for analysing various token metrics, rooted in mainstream economic thought. In turn, based on this modeling framework, we provided estimates for market capitalization, token price and quantity of tokens under different scenarios which reflect market fundamentals as well as the intrinsic use value of SovereignCoin tokens. We also provided guidance on the relationship between token price and two key variables, namely the value of the Sovereign Coin economy and velocity of token circulation.

Please contact is for the **'Sovereign Coin Economics'.**

9. Sovereign Dapps, Ecosystem and Business Model

In SovereignSky, similar to EOS, we plan for coin holders to become owners of a certain percentage of the network's computational power, bandwidth and storage. As such, they can rent out the resources owned by them to Dapps developers and providers, and thus earn money in a completely safe and passive way.

10. Dapps partners who will use SovereignSky

The SovereignSky ecosystem, similar to Ethereum, is programmed to allow other smart contracts, such as the coins of Sovereign, RUON, Under the Sun, TheFlixs and SovereignAid, to all be incorporated as Dapps onto the SovereignSky eco-friendly blockchain platform. SovereignSky's website aspires to permit users to vote on the inclusion of Dapps, and any community member, developers, individuals and companies alike, may will upload their Dapps to the site. The VC fund being created by listing SovereignCoin hopes to help finance these Dapps and developers to built on the Sovereign lowest carbon emissions blockchain.
Due to Sovereign's ultra low energy consumption we feel we are one of the safest blockchains for public opinion and future use by corporations wanting to start to accept cryptocurrency as payments . You've seen recently that Telsa won't be accepting Bitcoin due to its power consumption and its negative effects on the environment. The main Dapps are Malls of America (to be signed), Quad Studios, RUON, Sovereign, SovereignAid and Under the Sun are described below.

11.Dapp - Under the Sun

"Under the Sun" the all-in-one luxury jet, yacht, villa and private travel app - launched by the business director behind Jetsmarter - will be the first Dapp, after RUON, to be powered on the SovereignSky. This app will have a client base of the top 3% in the world and so its important to the morals and values of their HNW clients to be working on an eco-friendly blockchain.

"Choosing the SovereignSky blockchain was a our first and only choice because its not only the cleanest blockchain but also the fastest which is important for our booking system. We will also be launching our own color coin on their network - which we will provide as a reward scheme for our ultra high network users using the Under The Sun App."
- Joe Benson, MD, Under the Sun

12. Dapp - Shopping Malls of America

Ruon Inc. has sent a LOI partnership letter out to be signed with the biggest shopping malls in America. RUON will be the exclusive coin used in the three biggest shopping malls in America with over 180m visitors per year. The concept will use the soveignSky green blockchain and could also include the malls 500 flagships partner stores in the near future. More news coming soon.

13. Dapp -TheFlixs & Quad Studios

TheFlixs is a sophisticated whitelabel social + NFT platform. RUON inc. has signed a content deal with the biggest recording studio in America based in Times Square called Quad Studios. (https://www.quad.com/clients). TheFlixs will start minting NFTs for free (unlike on Etherumn) on the SovereignSky lowest carbon emissions blockchain when launched.

14. SovereignAid

SovereignCoin plans to interface with SovereignAid, a means of payment for charity purposes. SovereignAid will be used to acquire, in partnership with mobile manufacturers, thousands and once proven a success, hopefully millions of cheap android smartphones. Each of these will be loaded with RUON's app, digital wallet and smart card, to be given to missionaries, orphanages and the unbanked in developing countries. The founders are already in discussions with the head sisters of Missionaries of Charity, established by Mother Teresa, to help distribute the smart phones packaged within the **'solar connectivity boxes'** worldwide to charities and most importantly orphanages.

32. Strategic Partner : RUON AI

RUON AI, which will launch in Q421, has also been created by SovereignSky's founders, it seeks to be a holistic blockchain, social media app and ecosystem that will provide social interaction as well as digital asset swaps, marketing and many cool social features, including cryptocurrency wallets. RUON AI plans to provide the digital wallet (see figure) that will be used with SovereignSky funds, which will use full KYC/AML verification to prove the legitimacy of any user will be checked.

RUON AI wishes to also feature a smart card for easier use of cryptocurrency wallets, which plans to be available to SovereignSky users as well. Smartcards aim be distributed to villages and communities that are recipients of SovereignSky's 'solar connectivity boxes', and plans to enable the communities to buy food, medicine, clothes and other necessities out of these funds sent from users in the developed world.

RUON AI plans to feature an emergency button that permits individuals and communities in poor regions to request donations in case of emergency situations - for example fires, hurricanes, famine, war, floods or droughts. This is not restricted to developing countries - in fact, all features of RUON AI and SovereignSky seek to eventually be available in all countries. The emergency feature could just as well help an abused wife in the western world by raising enough money to transfer her kids and herself to a safe place.

Please see **www.ruon.ai** and the **Space Charity Deck** (available on request)
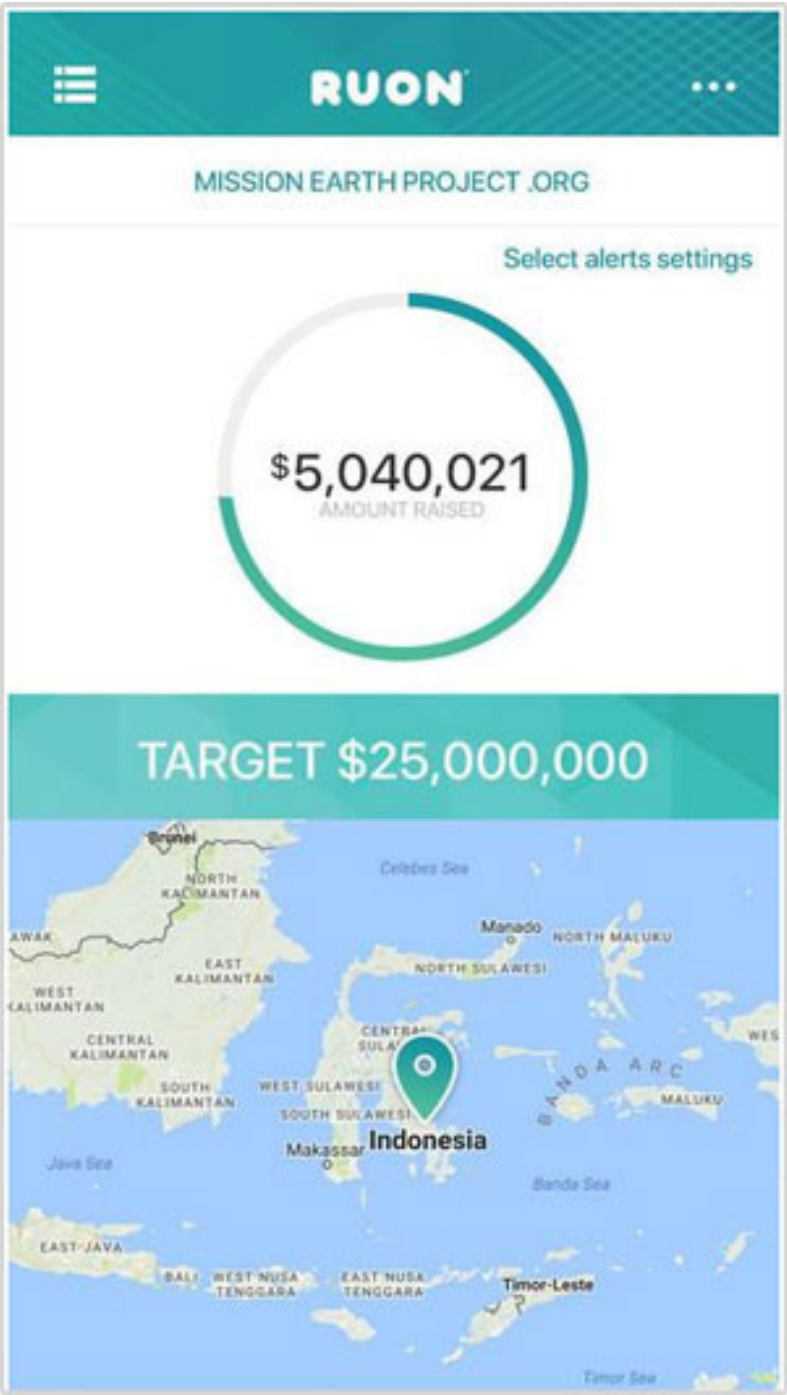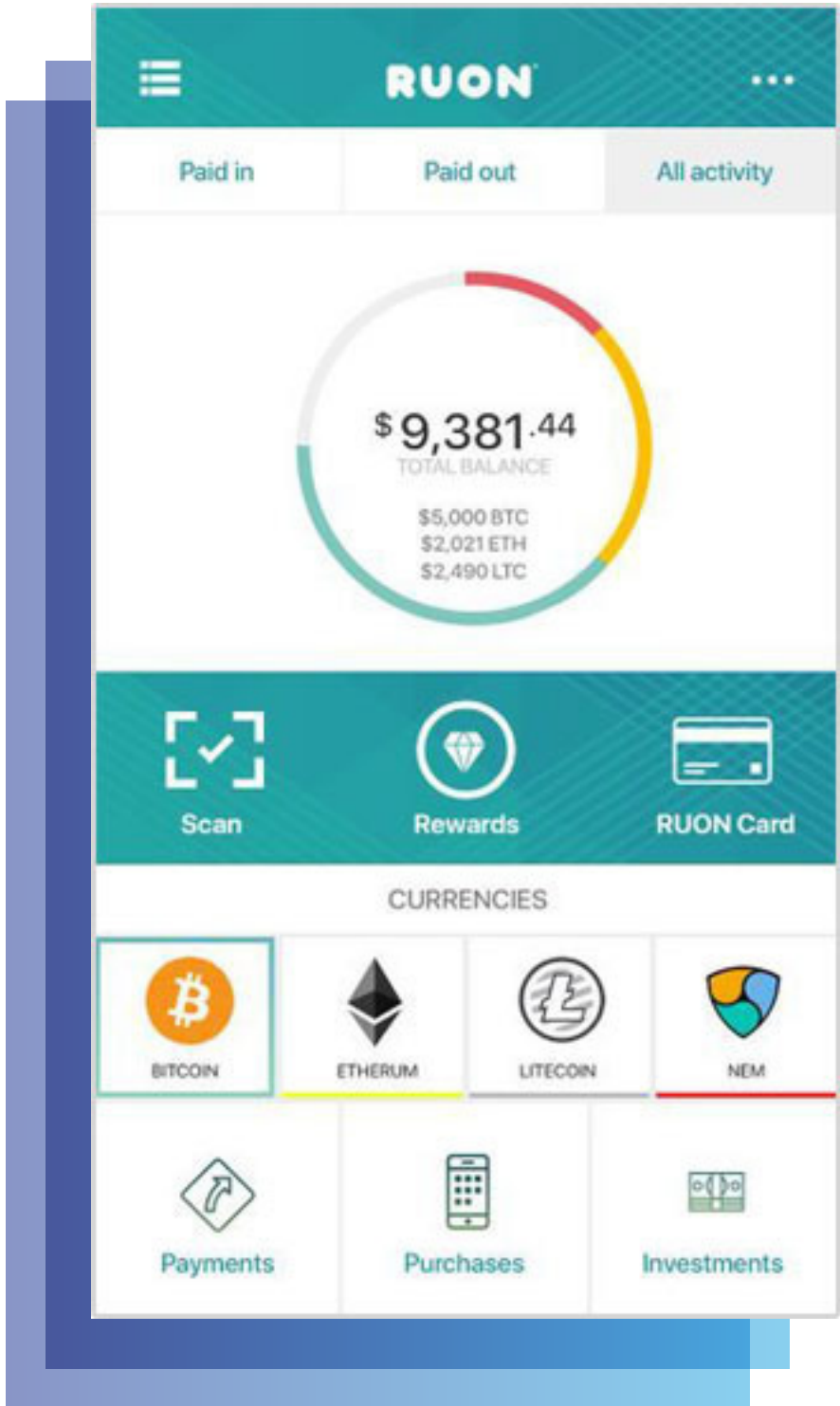
RUON AI plans to enable individuals to perform peer-to-peer donations - which is the most efficient way of funding charitable projects. In the non-profit field, a charity is considered to be an efficient organization if just 65% of the donated money is spent on charitable causes and no more than 35% on administrative and other costs of the organization. With the joint effort of RUON AI and SovereignSky, a rate of direct charity contributions of close to 97.5% is expected!

Not only individuals, but donating companies and organizations as well can track the distribution and success of their donations via RUON AI (see figure). They may even see pictures and videos of how their money has improved lives, created renewable energy sources, contributed to the education of kids, and so on.

Please see **www.ruon.ai** and the **Space Charity Deck** (available on request)

Team

Stan Larimer
CO-FOUNDER and CTO

This pioneering team includes Stan Larimer, The 'Godfather of Bitshares'. Stan Larimer is a prolific Blogger, Keynote Speaker and expert Consultant on real-time industrial grade digital currencies. He is CEO of Cryptonomex, which currently processes over half of all public blockchain transactions in the world. These include BitShares, Steemit, Peerplays, Muse, Golos, and next year EOS. BitShares and Steemit each exceed Bitcoin and Ethereum combined records for daily transactions and together they surpass the rest of the industry. Stan has used his MSEE degree to teach rocket science at the US Air Force Academy and to develop unmanned air, ground, sea and space 'drones' for 40 years with aerospace giants such as Lockheed Martin, Northrup Grumman, Boeing, General Dynamics, and SAIC. Stan has led engineering deployments from Cape Canaveral in 1998 to Western test ranges in 2001 and Fallujah, Iraq in 2008 and parking lots of Duke University and the Durham Bulls in 2011. "He Co-founded Invictus Innovations in 2013, Cryptonomex in 2015, Steemit in 2016, and Heronomex, and Hypernomex in 2017, Quintric, Sovereign Sky, Ruon, Biquitous, Terradacs, BEOS Limited Cooperative Association, and Mission Space in 2018." Stan has over 40 years experience in soft are, hardware, and systems engineering, program management, business development and even teaching rocket science at the US Air Force Academy. Contributing to 17 different R&D programs for air, ground, sea and space systems, Stan is now building a new industry to develop unmanned companies that produce smart currencies and other decentralized financial services.

Dino Lorenzi
RUON Inc. & SovereignSky Space Agency Partner

Dino Lorenzi is CEO & President at SpaceQuest, Ltd. the leading developer of advanced satellite technology for government, university and commercial use since 1994, specializing in the design, development, testing and manufacture of spacecraft as well as space and ground components for operation with low-Earth orbiting satellites.

Through innovative designs and the latest electronic technology, SpaceQuest is building satellites and satellite components faster and more cost effectively than ever before. Through innovative designs and the latest electronic technology, SpaceQuest is building satellites and satellite components faster and more cost effectively than ever before.

JC Oliver
Chief global Innovation Advisor

JC Oliver is an award winning digital creative, strategist, evangelist, futurist, investor & advisor with over 25 years global media experience.

He was Global Innovation Head of Microsoft & AOL before becoming new CEO o f R UON A I & SovereignSky. He recently launched his own innovation agency 31Flavas which he runs alongside his roles as Global Chief Creative Officer of Unlockd & EdisonX.

His passion is across both Digital Marketing/Transformation, Business Strategy & Innovation. His ideal drop off is the intersection of creativity & business fused with tech & science which he defines as the next big growth marketing opportunity. JC has spent his career in variety of roles crafting i deas & m unging them together with emerging tech to amplify & translate brand comms into immersive audience centric experiences. In 2016 he left his role as Global Chief Creative Officer at Verizon/AOL/Microso /Yahoo! Network (now Oath) after spending the previous 9 years as Microsoft's Global Head of Innovation. He delivers myriad thought leading presentations at industry conferences, digital schools and to clients & agencies on how the next creative revolution is upon us and ready to transform everything.

Timothy E. Burke
CO-FOUNDER, Chief Creative and Marketing Director

Tim is our Founding Father! He is a host of Digital Hollywood and has had articles published in entrepreneur magazine . He is the visionary Inventor of RUON & SovereignSky, the concept of SovereignAid, Founder of Hollywood's now famous MovieFund, Writer and Co-Director on Planet X and most recently executive producer on Lionsgate's "Killers Anonymous" which stars 2018 Oscar winner Gary Oldman and Jessica Alba. He is in talks with Marvel's Jeff Hadderstad - (Doctor Strange, Iron Man 3, Captain Marvel, Antman and the Wasp) to co-direct Ancient Alien epic; **"Planet X"** (which has been described in the Huffington Post as like "Star Wars on Steroids"). Infact, The very concept of SovereignSky and beaming cryptocurrency from space came from - and will make up - part of the currency in the Planet X Movie. His vision is clear. Like no other social media, banking and shopping platform on the planet, RUON is set to completely revolutionize life online. Tim sums up RUON in five words. Post. Stream. Earn. Spend. Give.

Brandon West
RUON Technology Director

Brandon is a Graduate of the University of Florida with a degree in Finance and Entrepreneurship. Brandon began his career in finance at Walt Disney World where he taught himself how to program, leading to the development of many applications automating various business area tasks. Brandon went on to serve in an IT role at Royal Caribbean and became an integral part of project development and deployment of the new 'Smart Ship' initiative. These projects included working internationally to build the largest and smartest ships in the world that currently sail the seas today.

Angus McGlynn
Mission Space, CEO

As the Co-Founder and CEO of Mission Space, Angus has led the rollout of this project since 2016. For more than 28 years, Angus has worked with technology companies worldwide developing their business and providing project t. He currently acts aign, marketing and media relations' services. His academic background is in product design and innovation management. He currently acts as an advisor to Greenwall Environmental Innovation, which is part funded by UK's Aerospace Cornwall to further their R&D into the world's first bespoke portable asbestos in materials analyser and it set to be located at the Space Aerohub in Spring 2019.

Thomas Carter
DIGITAL SECURITIES ADVISOR

Thomas is at the forefront of the smart securities revolution. He is a 30-year fintech innovator and CEO of DealBox and is pioneering the trillion-dollar digital transformation of capital markets. He has successfuly raised funding for diverse range of businesses including green and clean technologies, healthcare, sports, media, entertainment, finance, technology and more. Thomas, together with Dealbox, has strategized and is leading the capital funding for Mission Space.

Michael Taggart
STRATEGIC DEV & BLOCKCHAIN ADVISOR

Michael is director, co-founder and advisor to many successful blockchain based businesses such as Quintric, Biquitous and Eristica and is also President of Cryptonomex, the company that authored the Graphene blockchain, originally developed as the foundation of Bitshares. Michael, is a writer and member of the Forbes Technology Council.

Michael is also co-founder of Quint, a revolutionary new cryptocurrency that can be used as specie legal tender and is backed by gold and silver. Michael Taggart gained an interest in Bitcoin during 2012, later developing a multi-exchange trading soft are in 2013. After meeting Daniel and Stan Larimer, Michael became fascinated by blockchain technology and it's disruptive nature. Michael is President of Cryptonomex, developer of Graphene technology and author of DPOS.

As an advocate of DPOS technology, Michael is an international speaker that travels the world educating businesses, legislators, and developers on the features and benefits of Graphene technology. Michael is also cofounder of Quintric, the world's first legal tender cryptocurrency that brings back the concept of sound monetary policy. Michael also currently advises several blockchain based projects such as Mission Space, Biquitous, and Sovereign Sky.

https://www.linkedin.com/in/michaelxmarketing

Gerard Clutterbuck
SENIOR RESEARCHER

Gerard has been involved with Mission Space since its inception. With his background in Industial Design, Gerard will oversea our research division, keeping abreast of the latest technology advances with the aim of ensuring our space telescopes, future space exploration product development and R&D remain both current and leading edge technologies.

Colin Doughan
FOUNDER & CEO

Colin's sixteen-year career at Fortune 100 Aerospace firms has focused on implementing the Cost and Schedule management for two separate Billion plus Dollar US Air Force space development programs with 200-500 engineers each. Colin is experienced in executing the complexities of development programs with multi-thousand line schedules and multiple vendors. Colin received his MBA from the University of Nebraska and is creator of the Space Business Blog where he discusses the business opportunities of the final frontier.

David Forman
CEO of Cascade Systems, Founder of SpaceBridge Logistics

David is a visionary entrepreneur who brings groups of people together to accomplish incredible things, and believes that blockchains will fundamentally change the way the world does business.

David is the founder and CEO of Cascade Systems (CascadeSystems.io), an algorithmic trading company that supplies liquidity to emerging exchanges and projects. Cascade's core technology is a flexible trading system and portfolio management framework, enabling a broad range of algorithmic trading strategies, liquidity provision, and payment processing services. Cascade is currently a premier market maker in the decentralized exchange space.

David is also a co-founder of SpaceBridge Logistics (SpaceBridge.io), which is building a blockchain-enabled marketplace for space services. SpaceBridge is working directly with a variety of launch and satellite companies, with a focus on creating protocols for moving, repairing, and deorbiting satellites. David is passionate about leveraging blockchain technology to increase connectivity across the aerospace industry and help humanity become a space faring civilization.

Previously, David co-founded the game studio Serenity Forge, built his own algorithmic trading operation and obtained degrees in Physics and Music Composition.

Jonathan Bahai

Jonathan Baha'i is an entrepreneur with over 25+ years of experience in the high performance server hosting and telecommunications industry, and is the founder of a number of tech related companies which today focus primarily on blockchain technology.

From as early as 1997, he has worked independently to bring innovation and vision to all his ventures. This has included the establishment a regional ISP, and founding Hiccup Data Solutions, a SMB remote backup data protection service provider. In 2003 he worked to bring wireless mesh network infrastructure to western Africa. In 2006, he founded Serverbalance Data Solutions, an early pioneer and active cont... eveloper of Xen virtualization.

In 2012, he acquired a Nuclear Bunker data center in Nova Scotia, Canada, and founded Data Security Node Inc. For nearly five years he was dedicated to developing the nuclear hardened data center and building blockchain-based solutions. Primary networks he worked with included Bitshares, and Steem, while also mining various altcoins. In early 2016 he conceived and founded the Peerplays blockchain and has successfully lead its development and launch. He successfully raised a significant amount of Bitcoin funding for its ongoing development and has become the foremost authority in the space of provable fair blockchain gaming often sought after for speaking engagements and quotes on matters related to blockchain gaming.

In July 2017 he founded eXeBlock Technology Inc. through Numus Financial, a pure play blockchain company which went public in November of 2017 trading on the Canadian Stock Exchange (XBLK:CSE). As Founder, he successfully built and lead a team of 23 developers both locally and overseas to develop the first ever 5050 draw dapp, as well as a Bitcoin sidechain that could run on the high performance Peerplays Blockchain.

He continues to support the Peerplays in its development by leading new features that provide value to gamers, developers, and regulators.

Paul Martello
Blockchain enthusiast since early 2011

Paul Martello has been a blockchain enthusiast since early 2011 and first hearing about bitcoin. Later, when the Larimers, father and son, began to theorize on the necessity of a decentralized exchange, and subsequently on the many advantages of DPOS over proof-of-work technology, Paul began doing everything in his power to assist in the implementation of their visions. Now another technological innovation in DPOS, called BEOS and likely to rock the business world, has been theorized by Stan Larimer. Once again Paul takes a leading role to bring this from idea to manifestation. Paul's motto is "There at the beginning of the stories you love".

Paul Martello was born in Toronto, Canada. Upon finishing high school he moved to the Himalayas of northern India while still a teenager. There he was involved in expedition outfitting and ran guest houses and restaurants for visiting adventure tourists. After returning to the West, Paul worked in the mining industry in remote areas of the Yukon Territory of Canada. Subsequently his trajectory has included such stints as a performing musician, a printing and design company entrepreneur, acquiring a degree in Monetary Economics and Business Management, and several years as an auditor and special investigator for the Federal Government.

Paul first became interested in bitcoin and the possibilities of crypto currencies and blockchain technology in early 2011. He attended the London Bitcoin Conference in 2012 in London, England and subsequently traveled to university Economics departments distributing physical Casascius bitcoins to post graduated Ph.D. students and professors. Paul early recognized the limiting weaknesses of proof of stake mining for cryptos and the dangers inherent in centralized exchanges. He was therefore a very early and enthusiastic supporter of the decentralized exchange and distributed proof of stake movement birthed by the Larimers, father Stan and son Dan. Currently Paul lives in Greece. He is the CEO of Terradacs LTD, a soft are development company which has licensed its proprietary technology to the BEOS Limited Cooperative Association of Utah (BLCA). That enabled the BLCA to lauunch the "BEOS" blockchain, an enhanced clone of EOS that can be thought of as "middle chain" between BitShares and EOS and as "EOS for business". Paul also serves as a director of the BLCA.
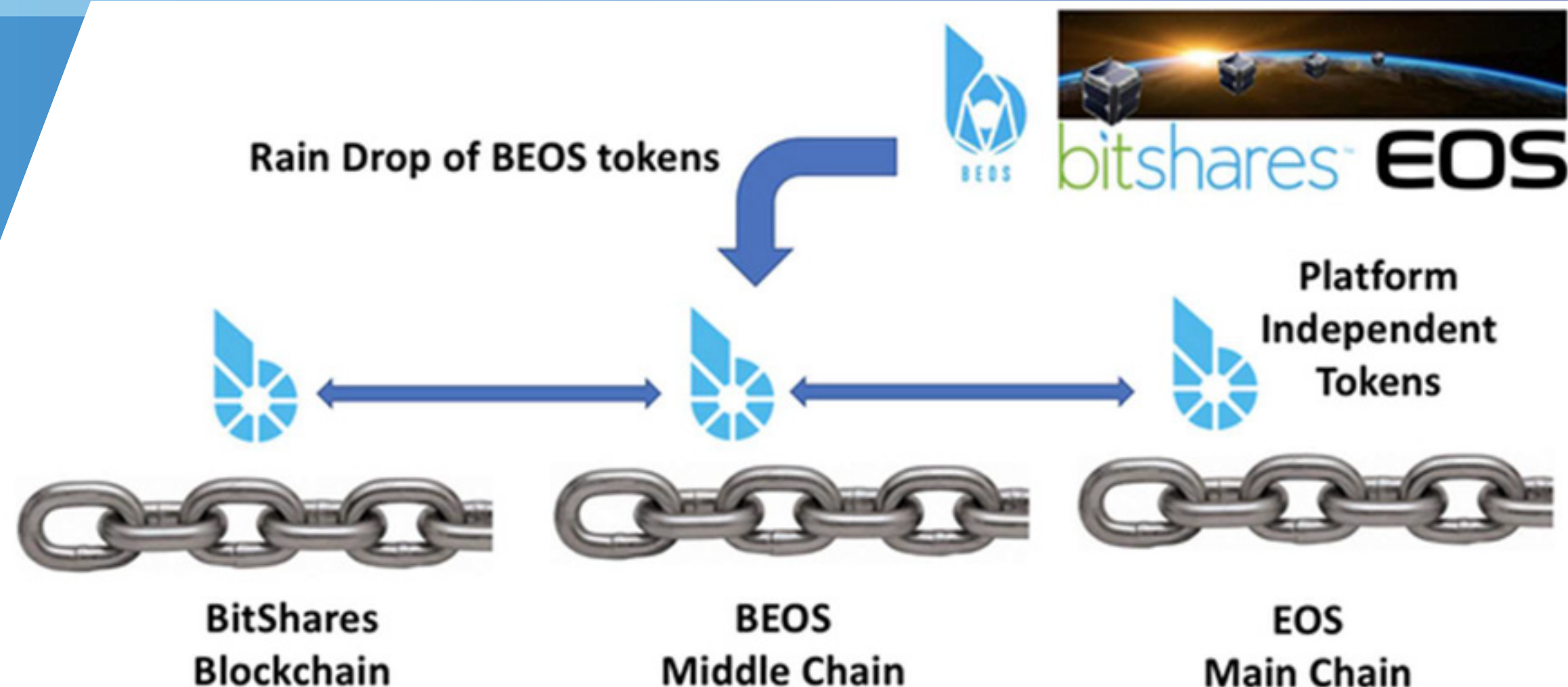
BEOS White Paper Supplement

DISCLAIMER: The following represents current thinking of the BEOS team and is subject to change without notice. Nothing should be interpreted as a statement of fact or promise to do anything. It is released here for community discussion purposes only.

Abstract: BEOS plans to be a straight clone of EOS.IO software and as such shares a common white paper with a few key differences. These differences primarily relate to the number of tokens, how they are initially distributed, support for gateway interfaces to BitShares making tokens portable across the two chains, and issues of governance. Future planned differences will hopefully make block signing nodes aware of their jurisdictions and smart contracts able to specify which jurisdictions may execute them. Additional planned changes will optimize the software for operation on satellites in international space and separate providers of hardware from operators of node software into separately elected roles. Most importantly, BEOS aspires to be a middle chain that we can modify freely to interface BitShares with the EOS main chain and the greater EOS ecosystem.

Rain Drop of BEOS tokens

Platform Independent Tokens

BitShares Blockchain

BEOS Middle Chain

EOS Main Chain

EOS.IO plans to introduce a new blockchain architecture designed to enable vertical and horizontal scaling of decentralized applications. This will hopefully be achieved by creating an operating system-like construct upon which applications can be built. The software aspires to provide accounts, authentication, databases, asynchronous communication, and the scheduling of applications across many of CPU cores or clusters. The resulting technology is hopefully a blockchain architecture that may ultimately scale to millions of transactions per second, eliminates user fees, and allows for quick and easy deployment and maintenance of decentralized applications, in the context of a governed blockchain.

PLEASE NOTE: CRYPTOGRAPHIC TOKENS REFERRED TO IN THIS WHITE PAPER REFER TO CRYPTOGRAPHIC TOKENS ON A NEW BEOS BLOCKCHAIN THAT ADOPTS THE EOS.IO SOFTWARE. THEY DO NOT REFER TO THE ERC-20 COMPATIBLE TOKENS BEING DISTRIBUTED ON THE ETHEREUM BLOCKCHAIN IN CONNECTION WITH THE EOS TOKEN DISTRIBUTION.

BEOS plans to be a unique opportunity for BitShares holders to partake in and benefit from the advanced technology that EOS provides, particularly with regard to smart contracts. The primary ways BEOS aspires to differ from the EOS main chain will be token distribution, governance, and an entirely new approach to censorship resistance.

BEOS tokens are designed to only be available to a Targeted Demographic consisting of BitShares and BROWNIE.PTS holders that stake their tokens to earn BEOS during the "rainfall" period and a BEOS Endowment Fund which serves in place of the BitShares Reserve fund to support growth and defense of the BEOS ecosystem. In this way, BEOS can hopefully be seen as a way to bring the benefits of a smart contract platform to BitShares without needing to buy EOS tokens or give up their BTS.

BitShares EOS tokens plan to be known as BEOS and work almost exactly like EOS tokens. They will hopefully be allocated to members of the Targeted Demographic that stake their tokens according to the process outlined here. 100% of these tokens will be distributed to members of the Targeted Demographic who wish to claim them over a previously prophesied period of Seven Weeks, Forty Days and Forty Fortnights (i.e. 89 days for BEOS and 80 weeks for RAM).

BEOS plans to have an unapologetic blend of public/private, compliant/ iconoclast, centralized/decentralized, and open/closed features. We have not let ideological purity get in the way of seizing new territory others have neglected in the name of traditional blockchain dogma. BEOS hopes to break from blockchain tradition, embrace new thinking about censorship resistance, and pursue a radically new approach to achieve mainstream adoption.

EXPLORE THE BEOS UNIVERSE

15. BEOS Development Team

BEOS is being developed by Dan Notestein of blocktrades.us fame under contract to Terradacs, Limited, a privately-funded development company based in Malta. Dan has been a contractor from the beginning of BitShares, working for Invictus Innovations, Cryptonomex, and a multitude of other graphene projects. Terradacs is directed by CEO Paul Martello. Funding to put BEOS into space is being provided by SovereignSky, a joint venture between Terradacs and Ruon.ai & Ruon.Inc led by Tim Burke. Satellite technology plans to be provided by SpaceQuest.

16. Evolution: From Bitcoin to BEOS

Blockchain and distributed ledger technology are truly revolutionary and have the potential to change our economic system, the way humans interact with each other, and the Internet itself. Indeed, we are witnessing something massive beginning to take its rightful place in the world and in our lives.

Bitcoin was the revolution that changed everything. It is excellent for highly secure and highly censorship resistant transfer of value. It was the first technology that enabled two individuals to exchange funds without the need for a trusted third-party. While revolutionary and the best at what it does, its functionality is limited. On-chain transactions are slow, and sophisticated smart contracts simply are not possible on the Bitcoin network.

BitShares was the beginning of the evolution. It showed that complex unmanned companies could be hosted on the blockchain with highly-optimized embedded smart contracts used to implement smart coins and other services.

Ethereum followed a year later, demonstrating how complex decentralized applications could be deployed and run on a blockchain. It demonstrated that a blockchain could do far more than simply process transactions. Developers flocked to develop on the Ethereum network and thousands of projects launched tokens of their own. Like many things, Ethereum became the victim of its own success. The world wants to use a platform for decentralized applications, but Ethereum could not handle the load. One successful project on Ethereum can and has brought the network to its knees. The blockchain has become so bloated that a normal user would have a difficult time running a full node.

Graphene (the tech behind BitShares 2.0 and a year later Steemit) was the next major evolution of blockchain technology. They were the first demonstrations of at least two extremely important leaps that made mainstream adoption viable. First, they showed the world that using a blockchain could make a user feel like they are using intuitive software and not something complicated only for the technically savvy. Second, these projects demonstrated that decentralized applications could scale far beyond what anybody thought was possible. The importance of graphene technology cannot be overstated in the world of blockchain. Today, BitShares and Steemit remain vibrant communities that taken together, comprise a commanding majority of all transactions across all blockchains.

EOS is hopefully the most recent important evolution in blockchain. The creator of graphene technology (BitShares and Steem), built upon the underlying technologies in BitShares and Steem to create a platform where anybody could develop and deploy scalable decentralized applications. EOS is still in its infancy but is already handling more transactions than any other blockchain. EOS plans to be the first real blockchain contender that is capable of supporting user-defined decentralized applications that can scale.

Operations on the most active blockchains (7 day average)

KIN: 0.7 %
ETH: 1.1 %
BTC: 1.3 %
STEEM: 1.8 %
BTS: 4.2 %
WAX: 10.7 %
EOS: 79.5 %
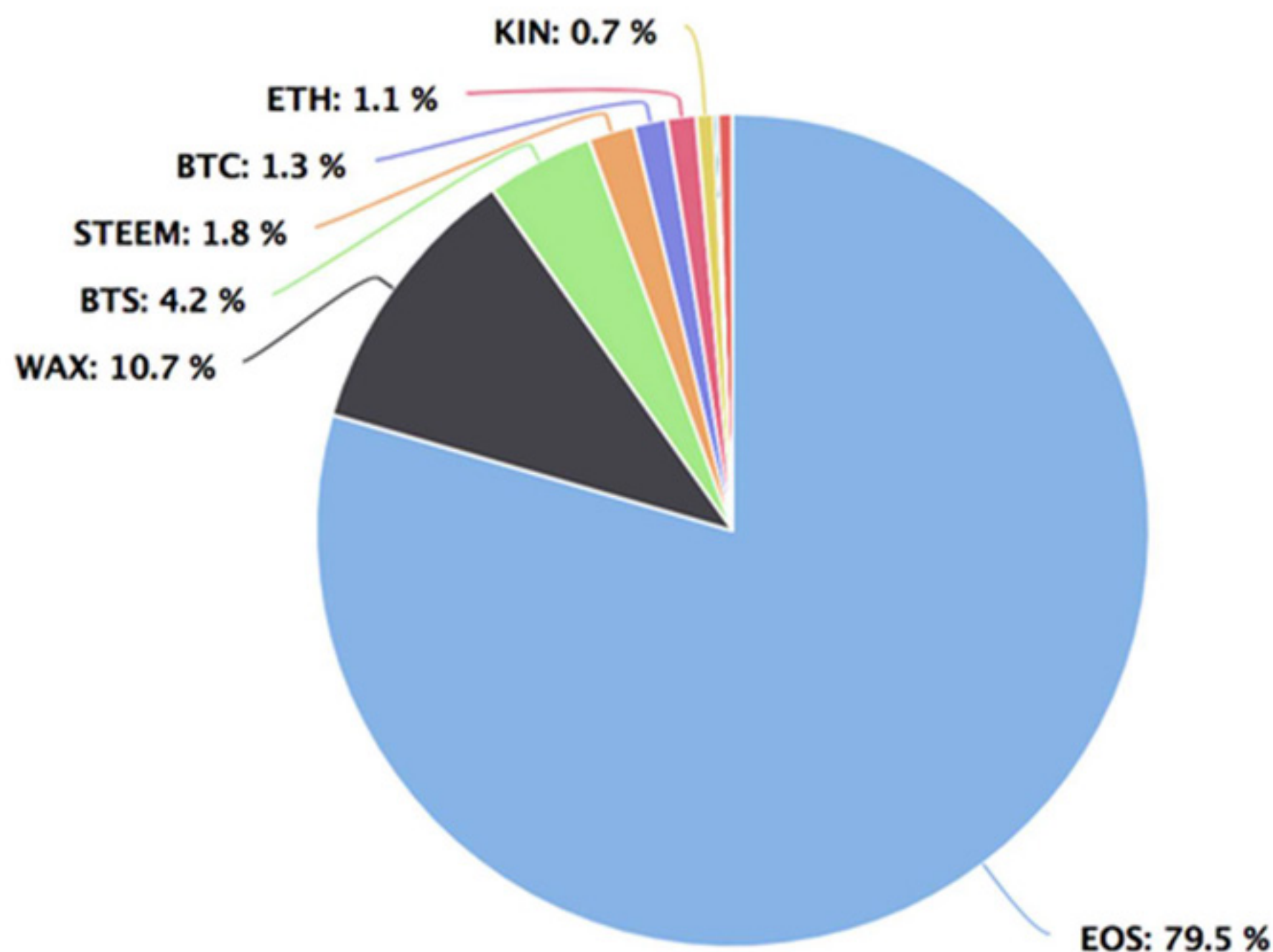
Unfortunately, cryptocurrency enthusiasts that supported the first implementation of graphene technology (which led to EOS), BitShares, have been provided no way to participate in the new EOS ecosystem apart from buying tokens. **BEOS plans to bring the BitShares and EOS worlds together to ensure that they benefit one another. Perhaps of equal importance, BEOS seeks to evolve the entire concept of censorship resistance so that companies can operate on the blockchain with total regulatory certainty.**

We consider all graphene technology to be part of the same family and BEOS aspires provide the link between EOS and BitShares. It will hopefully connect these distinct ecosystems so that the products and services can flow freely between them. BEOS can be viewed as an optional free upgrade to both BitShares and EOS. Those who do not want to benefit from these improvements are free to ignore the upgrade and both universes will remain unchanged to them.

17. EOS is the Baseline

BEOS seeks to utilize the EOS software as developed by Block.one as its default with some key differences that are outlined in this document. An important design consideration is to keep BEOS as compatible as possible with EOS so that it can enjoy the never-ending flow of new technology from the EOS developers as soon as it is released as open source. Meanwhile, BitShares plans to continue to offer its unique advantages to the EOS ecosystem, unconstrained by some of the philosophical design decisions made by that community. This means that BitShares and EOS holders can enjoy the best of both worlds and continue to evolve together. In this way, there is no real advantage to building an alternative to BitShares on top of EOS, though no doubt some will still seek to do so.

When accessing BEOS via the forthcoming BEOS API, BitShares and EOS chains seek to ultimately appear as a single "braided" blockchain with a nearly seamless fusion of all features. This may become more seamless over time to the extent that BitShares holders vote to extend their software to support side chain functionality, but it is not necessary for BEOS to function.

18. Block Production: The Evolution of Censorship Resistance

Bitcoin, Ethereum, BitShares, Steem, EOS, and most blockchains are designed to be inter-jurisdictional, spread out over many jurisdictions, under the theory that if some government shuts down nodes in one jurisdiction, the network plans to simply heal itself with nodes in the remaining jurisdictions. This is much like the Internet itself which was designed to survive nuclear war by routing around smoking craters. **However, this jurisdictional unpredictability presents a major problem for companies that require regulatory certainty.**

While inter-jurisdictional blockchains make it virtually impossible to stop a particular transaction, they provide no protection to the person or group conducting the transaction. When considered from this perspective, blockchain transactions can be easily censored after the fact. People can be arrested, property can be seized, and organizations can be fined or shut down. BEOS seeks to develop a new kind of censorship resistance by designing the blockchain to be "intra-jurisdictional" (confined to one jurisdiction) and ultimately "jurisdictionally agile" (able to control which operations take place in explicitly designated jurisdictions). To be clear, this is not an attempt to limit the kinds of transactions that can be conducted on BEOS. Instead, it is intended to provide certainty for individuals and groups that want the protection of blockchain-friendly jurisdictions. If a company has to wonder if their transaction or operation will take place in a jurisdiction where they are violating the law, censorship resistance has little practical value.

Beyond the desire to integrate BitShares into the well-funded and rapidly evolving EOS dominated ecosystem, a desire to implement a stronger capability to confine a class of transactions to the jurisdictions that permit them has guided the design of BEOS. **The belief is that adoption by many industrial and institutional players will be encouraged if they can be assured of regulatory simplicity, clarity and compliance for their business processes.**

Block producing equipment seeks to be highly specialized and located in specific predetermined locations. Elected block producers plan to have control over the software running on this equipment but not necessarily control over the machines physically unless they happen to be in the same location. This targets to ensure that nodes are run in specific jurisdictions and that the best possible equipment is being used. For example, nodes may eventually run in the following locations: on a satellite in space, on a ship at sea, in Utah, and in Ireland. When elected to the role of block producer, that individual or organization aspires to be issued control over a specific instance of node hosting hardware while remaining responsible for providing backup hardware of their own choice.

There are clear advantages to engineering a jurisdictionally-agile blockchain that can guarantee that specific actions and transactions take place completely inside permissive jurisdictions. More importantly, it hopefully removes all doubt about which laws may apply. This creates certainty for organizations of all types who find the current regulatory patchwork too risky and difficult to navigate. The legal viability of such a strategy is certainly untested, but the benefits of regulatory certainty are clear and very much needed. BEOS plans to blaze the trail on this area by guaranteeing to organizations that their transactions are taking place in a jurisdiction where they know themselves to be compliant. Being able to guarantee that there are no such vulnerabilities may be a highly sought feature by those capable of bringing a large volume of transactions to the BEOS platform. This would be a unique benefit and feature that no other blockchain has ever been able to offer its developers.

BEOS aspires to be launched by an appointed group of block producers that are selected by a founding team. Once the network is launched and determined to be stable, BEOS holders plan to be able to elect the block producers according to the standard voting mechanism in the EOS software. The difference will be that block producers will run on specialized private equipment in particular jurisdictions. Simply put, BEOS separates equipment providers from elected node operators. Here is a tentative list of initial equipment providers subject to change without notice.

	Host Organization	Jurisdiction
1	Beosnick Satellite (SpaceQuest)	International Space'
2	Quintric Depository	State of Utah
3	Blocktrades.us	Germany
4	Sovereign Sky, Ltd.	Malta
5	Mission Space	Ireland
6	Cruise Ship (Cryptonomex)	International Waters
7	Quintric Depository	State of Utah
8	Blocktrades.us	Canada
9	Terradacs	Malta
10	Biquitous	State of Idaho
11	Cruise Ship (Cryptonomex)	International Waters
12	Data Security Node	Nova Scotia, Canada
13	Blocktrades.us	Finland
14	Sovereign Sky, Ltd.	Malta
15	Mission Space	Ireland
16	Cruise Ship (Cryptonomex)	International Waters
17	Quintric Depository	State of Utah
18	Blocktrades.us	Germany
19	Terradacs	Malta
20	Biquitous	State of Idaho
21	Cruise Ship (Cryptonomex)	International Waters

This is a different way of thinking about censorship resistance than conventional blockchain thinking would normally support. It may also be the major factor holding entire industries back from participating in the cryptocurrency space. It will be controversial among those trained in Bitcoin conventions but could open the floodgates for businesses that will never participate in the current blockchain environment due to regulatory uncertainty.

19. BEOS Ground Chain Operational

One of the key BEOS design objectives is to make all tokens on the BitShares network portable -- able to move freely from the BitShares blockchain onto the BEOS chain and from there out into the multi-chain universe of the EOS main chain and its side chains. In fact, the pairing of BitShares and BEOS will make BitShares appear to the rest of that EOS universe as just another EOS chain.

Ultimately, this vision will be accomplished with whatever atomic side chain communication mechanisms are developed by the greater EOS community. However, BEOS need not wait for those breakthroughs, and permission to implement it from BitShares voters, to begin operations. Instead, one or more service providers plans to provide gateway functions that will lock up a token on its home chain and reissue a surrogate token on one or more side chains. The target is for users to simply send tokens to a gateway addressed to an account on another chain and the token will appear to vanish here and reappear there. Those familiar with blocktrades.us will find this very natural.

20.Token Distribution "Raindrop"

The plan is in order to obtain BEOS tokens, BitShares or BROWNIE.PTS tokens must be transferred from the BitShares chain to the BEOS chain using the cross-chain transfer gateway described above. While their tokens reside in an account there, that account seeks to receive a steady "rainfall" of BEOS for the duration of the raindrop. Ideally, BEOS rainfall will last for at least 89 days during which BEOS tokens will be continuously distributed at a preprogrammed rate. There will be a total of 2.5 billion BEOS tokens distributed, with all of them falling in the first 89 days. The Targeted Demographic will be able to begin participating at any point during the rainfall period. However, the longer tokens are staked, the more BEOS tokens can be accumulated. During the first 89 days of rainfall, all accumulated BEOS tokens plan to remain locked from spending or trading. This will ensure that no BEOS tokens are traded until all tokens for that period are distributed. The benefit of this method is to ensure that no tax liability is created (in relevant jurisdictions) for new BEOS token holders because the tokens will have no market value until they are unstaked and then tradable. After the 89 day locking period ends, the BEOS tokens aspire to be freely trade and thus take on a free market value that may become taxable as income in some jurisdictions.

Participating tokens from the Targeted Demographic transferred to the gateway accounts seek to be held until a user withdraws them, presumably at the end of the extended rainfall period. Therefore, it will not "cost" anything to obtain BEOS beyond the effort to move them between the two chains and the delegation of proxy voting power to the gateway operator entrusted to vote for BitShares policies and worker proposals favorable to deeper BEOS integration. Participation may be for any amount of time with distributions taking place at maintenance interval rates.
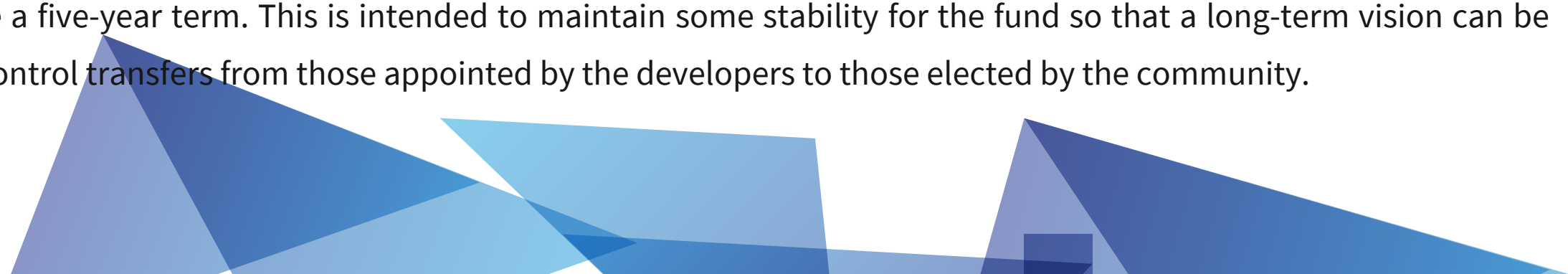
Note that the Targeted Demographic for BEOS token distribution does not include EOS holders according to EOS conventions in the same way that the distribution of EOS tokens or STM tokens does not include BTS holders. This is to keep these communities isolated from any regulatory entanglements they may individually encounter associated with token distribution. Instead, the precedence has been established by Steemit and EOS developers that all members of the graphene family will honor each other by freely using and sharing each other's publicly licensed open source code.

21. Governance

Block.one has no role in BEOS and we do not foresee any circumstances in which they will get involved. Therefore, we do not foresee them utilizing their own funds to help develop the BEOS ecosystem. BEOS plans to still benefit from upgrades and improvements Block.one develops and releases as freely-licensed open source software because the two chains will essentially be the same and it will be trivial to import any EOS upgrades to BEOS.

BEOS will need to fund certain important endeavors to protect the network. A BEOS Endowment Trust Fund seeks to be created for this purpose, but it will not be managed on the blockchain like the existing BitShares Reserve Fund. Instead, it targets to be managed by a traditional legal trust fund, the BEOS Limited Cooperative Association("BLCA"). This is for pragmatic reasons. A conventional board of trustees is able to make contracts, act quickly, and maintain commitment to a plan longer than a purely democratic process can achieve. **This is another way where BEOS may be thought of as a hybrid chain built to be efficient and pragmatic, not ideologically pure**.

Initially, the Trustees of the fund plan to be selected by the founding BEOS team. After launch, trustees target to be elected on a staggered basis much the way that Commissioners in the American SEC serve their terms. One trustee seeks to be rotate out and be replaced each year with another who will then serve a five-year term. This is intended to maintain some stability for the fund so that a long-term vision can be developed and executed while control transfers from those appointed by the developers to those elected by the community.

Initial BCLA Trustees and their term expiration dates

🛰️ Dec 31, 2019 Larry Hilton

🛰️ Dec 31, 2020 Angus McGlynn

🛰️ Dec 31, 2021 Tim Burke

🛰️ Dec 31, 2022 Michael Taggart

🛰️ Dec 31, 2023 Paul Martello

Elections seek to be conducted by the Trustees, perhaps using special tokens that are issued for the specific purpose of electing Trustees. Election tokens may be issued by the Trustees in direct proportion to the amount of BEOS held in each account over a period of time. In order to vote for a specific trustee candidate, the BEOS holder must simply send their election tokens to that candidate. At the end of the election period, the candidate with the most election tokens wins and plans to become a Trustee. This offers a fully transparent and simple method for token holders to participate in trustee elections. This process is subject to change by unanimous decision of the Trustees and may turn out differently in your particular universe.

The responsibilities of the fund targets to include rapid legal response to defend the network and its participants to make grants for the defense and welfare of the blockchain industry at the discretion of the trustees. It aspires to be funded with 1 billion BEOS tokens to ensure that there are sufficient resources. The Trustees plan to hold the right to vote for block producers and participate in governance related votes. This results in a bicameral form of government, initially with 2/7ths (1B BEOS) of the voting power residing with the Trustees and 5/7ths (2.5B BEOS) residing with the holders of the circulating supply. If the Trustees gradually spend their fund into circulation their voting power will likely decrease, although the fund is envisioned to function like an endowment to be borrowed against or used to generate income for the Trust, ideally without touching the initial principle.

At the time the chain is first launched, a general-purpose worker proposal system will not yet exist and must be developed. Because of this, the chain plans to begin its life with a hard-coded Genesis Worker Account (GWA) to guarantee that the chain will have adequate initial funding for future needs. Block Producers aspire to be paid from a small amount of inflation, not to exceed the max rate already established for EOS.

The GWA targets to be considered as automatically voted in as a side-effect of depositing funds to the rainfall gateway. In other words, BEOS users are implicitly voting that GWA and endowment plan to be spent on the maintenance and future development of the chain by claiming their tokens. This likely ensures that there will be a sufficient pool of BEOS to maintain and enhance the chain and that the costs of bug fixes and improvements are shared equally by all the participants in the network.

The GWA plans to stop accumulating funds after two years, but unused funds accumulated in the account will still be available to fund support of the blockchain until the account's balance is exhausted. If and when the blockchain has implemented a general-purpose worker proposal system, worker proposals can be created by any BEOS holder who wants to propose specific tasks they would like to see funded that they believe will be beneficial for the community.

22. Gateways Managed by Block Producers

As the bridge between BitShares and EOS, BEOS aspires to enable any token running on the BitShares network to be easily moved to the BEOS blockchain and eventually to other EOS side chains. This plans to be accomplished in one of two ways, depending on how the BitShares community chooses to proceed. If the BitShares community votes to enable inter-blockchain capabilities, this will hopefully take place entirely on-chain, which would be ideal. Otherwise, this will likely be accomplished through gateways initially operated by the developers, but ultimately operated by the block producers.

23. Proxy of Staked BTS Voting to BCLA Trustees

While participants in the rainfall have their BTS locked up in escrow backing corresponding proxy tokens on the BEOS side, they are explicitly licensing the BCDT trustees to vote those BTS for the good of BEOS integration with BitShares. This should hopefully increase the value of the BEOS rainfall they are collecting, by supporting closer BTS integration.

24.Summary

BEOS plans to take a pragmatic approach using trust engineering techniques drawn from traditional human in the loop trust structures for governance combined with incorruptible blockchain technology for asset ownership and smart contracts. Depending upon willingness of the BitShares community to support tighter integration, this may change over time.

25. RAM Distribution

RAM and how it's distributed has been a major point of contention on the EOS main net. RAM speculation has led to hoarding which has driven the costs of deploying soft are far higher than it should be. RAM should be allowed to trade on the open market but the Bancor algorithm is not the open market. It can be easily gamed and has been to the detriment of developers and token holders. Decoupling EOS token ownership from ownership of RAM has had negative consequences for the entire EOS network and arguably, the price of EOS tokens. It has created a massive disparity between the cost of RAM and all other network resources.

Telos is proposing an alternative RAM distribution scheme where the Telos Foundation plans to attempt to control RAM prices through controlling supply. Both the EOS and Telos models have merit but neither is ideal. They have effectively removed the most valuable part of the network from token owners forcing them to spend their tokens simply to utilize the network. Network resources should be allocated to the token owners in proportion to their token ownership.

The BEOS network aspires to distribute RAM to the Targeted Demographic in the same way BEOS tokens seek to be distributed except that the rainfall period will occur over a longer period of time. It targets to start when the BEOS rainfall begins and last for at least 40 fortnights (80 weeks. This plans to serve as a strong incentive for BTS holders to keep their tokens locked up, thus removing them from the general supply. This could have the added benefit of increasing the value of BTS tokens.

26. Summary of Distribution

2.5 billion BEOS tokens plan be distributed to members of the Targeted Demographic that store their tokens on the BEOS platform over an 89-day period to be announced. RAM seek to be distributed in a similar manner over a period of 80 weeks. 1 billion BEOS tokens plan to be rain dropped to the BCLA Trust.

27.The Code is the Law

Regardless of what may be stated in this White Paper Supplement, the only source of official information is contained in the source code that may or may not be an attempt to imperfectly implement its ideas. No one should rely on anything said herein for taking any actions whatsoever in the real world in which they are living. **This document is subject to change without notice.**

28. The Sovereign Space Charity Global Gameplan

M1: Help Eradicate extreme global poverty and protect all children & wildlife by 2032.

How to eradicate global poverty?

This is not the first time this has been attempted. Currently, the World Bank and charities like the Red Cross and UNICEF are raising billions trying to solve the problem. However, like with many big problems, it takes a radical idea or concept to break through the traditional tried and tested methods to achieve its goal.

How can these issues be solved?

This is not the first time this has been attempted. Currently, the World Bank and charities like the Red Cross and UNICEF are raising billions trying to solve the problem. However, like with many big problems, it takes a radical idea or concept to break through the traditional tried and tested methods to achieve its goal.

How can these two issues be solved?

We at SovereignCoin feel that now with the capabilities of blockchain technology capabilities, mobile digital wallets, cryptocurrency smart cards and a global financial infrastructure so Mankind's biggest and most important mission can finally be achieved.
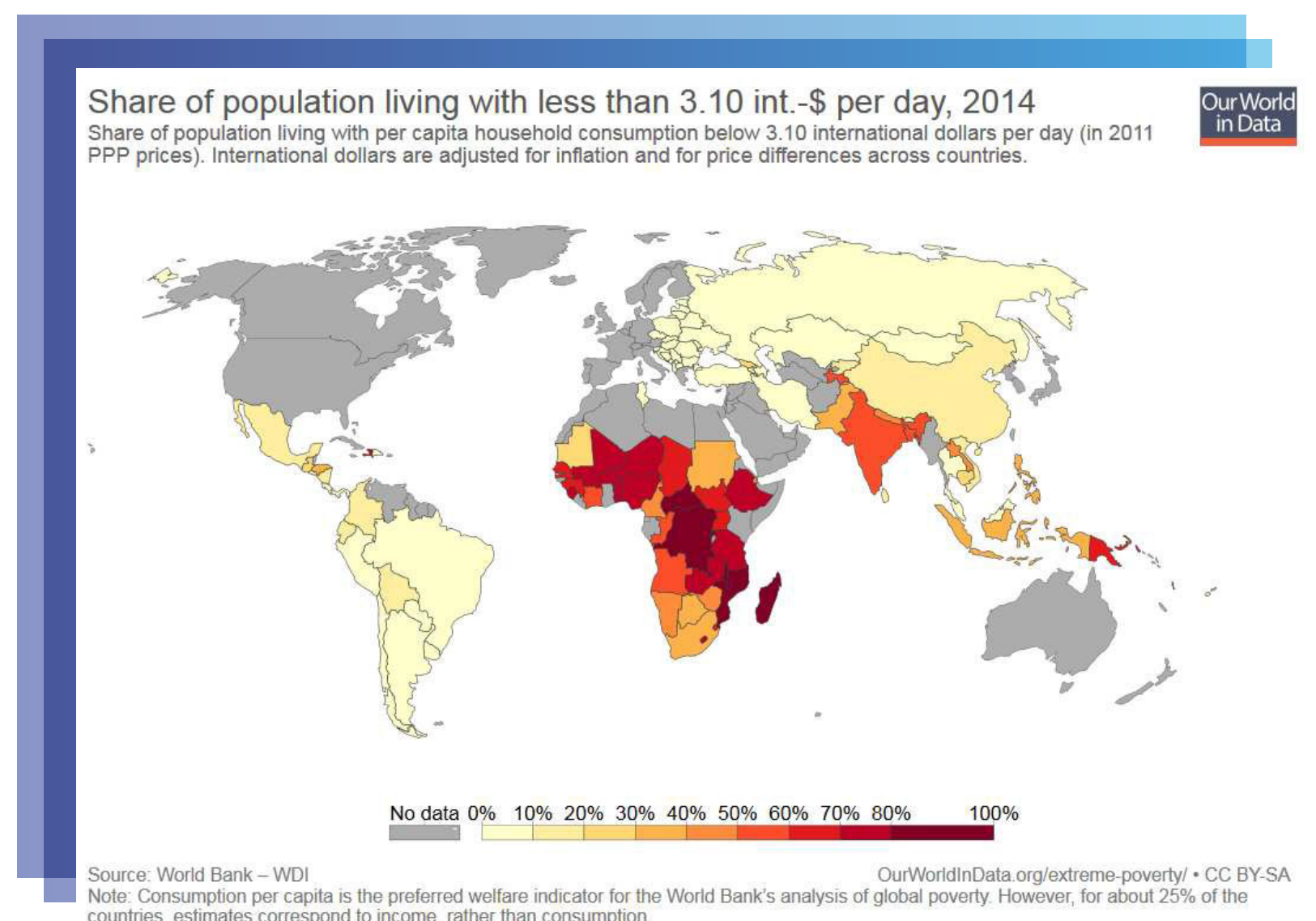With Sovereign, we propose a holistic solution:

"A global cryptocurrency and financial digital network that is interchangeable with other blockchains and designed for use by central and individual banks, Fortune 500 Companies, hedge funds, family asset managers, pension funds, large corporations, financial institutions, national treasuries and state sovereign funds. These institutions connect to a Sovereign currency which can instantly distribute digital currency to hundreds of millions of digital wallets with smart cards which have been distributed to villages, charities, schools, churches, missionaries, orphanages, wildlife conservationists and people in need throughout the world".

Inefficiencies in the Global Economy

Poverty is defined as a per capita household consumption below 3.10 international dollars per day while extreme poverty is as low as 1.90 international dollars per day1. International dollars are the equivalent in purchase power to USD. Extreme poverty still affects about 10% of the world population and half of this population lives in Sub-Saharan Africa.

Figure 3. opposite shows that in Africa and Asia, and to a lesser extent in South America, a sizable proportion of the population are still living in poverty. The causes for this are manifold and unequal access to the global markets is one of the most important. Although statistics about poverty and extreme poverty by the World Bank are not available for many industrialized countries.

Share of population living with less than 3.10 int.-$ per day, 2014
Share of population living with per capita household consumption below 3.10 international dollars per day (in 2011 PPP prices). International dollars are adjusted for inflation and for price differences across countries.

No data 0% 10% 20% 30% 40% 50% 60% 70% 80% 100%

Source: World Bank – WDI
Note: Consumption per capita is the preferred welfare indicator for the World Bank's analysis of global poverty. However, for about 25% of the countries, estimates correspond to income, rather than consumption.

OurWorldInData.org/extreme-poverty/ • CC BY-SA

Although statistics about poverty and extreme poverty by the World Bank are not available for many industrialized countries, it cannot be inferred that poverty and extreme poverty are non-existent in these parts of the world. Rather, the same situation seen worldwide repeats itself on a smaller scale: rural areas that are disadvantaged in terms of education and technology, and thus in terms of access to national and global markets, suffer from higher poverty levels, in developed as well as in developing countries. As the World Bank says:

The vast majority of the global population living under the poverty line live in rural areas and have limited to no access to education. Most are employed in the agricultural sector and over half of the population is under the age of 18 years old.

However, poverty is not an intractable problem. Since 1990, nearly 1 billion people around the world have moved out of extreme poverty. This was due primarily to the economies of China, India and Indonesia – which all had significant technological progress and aggressively targeted global markets, demanding their share of opportunity.

Therefore, if market participation can be improved in other impoverished countries with weaker economies, it will be possible to move closer towards our goal of abolishing poverty worldwide.

People Living With Abuse

On average, nearly **20 people** per minute are physically abused by a domestic partner in the United States. In one year, this equates to more than 10 million women and men. 1 in 3 women and 1 in 4 men have been victims of [some form of] physical violence by a domestic partner within their lifetime.

Child Abuse

In 2012, 82.2% of child abuse perpetrators were found to be between the ages of 18-44, of which 39.6% were recorded to be between the ages of 25-34. In the United States, more than 4 children die from child abuse and neglect on a daily basis. Over 70% of these children are below the age of 3.

Globally in 2014, 1 billion children aged 2–17 years experienced physical, sexual, emotional or multiple types of violence.

A quarter of all adults report having been physically abused as children.

One in five women and one in 13 men report having been sexually abused as a child.

In 2014, children comprised 28 percent of detected trafficking victims.

Every year, there are an estimated 41,000 homicide deaths in children under 15 years of age.

USD 7 trillion is lost due to violence against children each yea, equivalent to 8 percent of global GDP.

Sources:

🛰 Hillis S, Mercy J, Amobi A, et al. Global Prevalence of Past-year Violence Against Children: A Systematic Review and Minimum Esti-mates. Pediatrics. 2016;137(3):e20154079

🛰 World Health Organization Media Centre Fact sheet N°150. Child Maltreatment, September 2016.

🛰 UNODC, Global Report on Trafficking in Persons 2016 (United Nations publication, Sales No. E.16.IV.6).

🛰 endviolenceagainstchildren.org

Based on the updated poverty line of $1.90 a day, World Bank projections suggest that global poverty may have reached 700 million, or 9.6 percent of global population, in 2015.

The working poor, who work and live on less than $1.90 a day, accounted for 10 percent of workers worldwide in 2015.

Sub-Saharan Africa is home to 43 percent of the global poor.

On average, a child in our sponsorship program spends 4,000 hours in safe, nurturing programs, is at least 50 percent more likely to graduate college, is 14 to 18 percent more likely to have salaried employment and is 35 percent more likely to find white-collar employment as an adult.

Almost three-fifths of the world's extreme poor are concentrated in just five countries: Bangladesh, China, the Democratic Republic of Congo, India, and Nigeria.

Eighty percent of the worldwide poor live in rural areas, 64 percent work in agriculture, 44 percent are 14 years old or younger and 39 percent have no formal education at all.

Eleven children under age 5 die every minute, and 35 mothers die during childbirth every hour. 6 Every year nearly 45 percent of all child death under 5 are newborn infants, babies in their first 28 days of life or in the neonatal period. Three quarters of all newborn deaths occur in the first week of life.

In developing countries nearly half of all mothers and newborns do not receive skilled care during and immediately af er birth.

Up to two thirds of newborn deaths can be prevented if effective health measures are provided at birth and during the first week of life.

The global maternal mortality rate is 45 percent.

Every day, 800 women die from causes related to pregnancy, childbirth, or postpartum. Most maternal deaths occur in developing countries. 3

Lack Of Water

In 2015, 71 percent of the global population (5.2 billion people) used a safely managed drinking-water service – that is, one located on premises, available when needed, and free from contamination.
Globally, at least 2 billion people use a drinking-water source contaminated with feces.

By 2025, half of the world's population will be living in water-stressed areas.

Since 2000, 1.4 billion people have gained access to basic drinking water services, such as piped water into the home or a protected dug well.

Over 10 percent of the population still relies on untreated surface water in 22 countries. 4 At least 10 percent of the world's population is thought to consume food irrigated by waste water. 2 2.3 billion people still do not have basic sanitation facilities such as toilets or latrines. Of these, 892 million still defecate in the open, for example in street gutters, behind bushes or into open bodies of water. 2

The countries where open defecation is most widespread have the highest number of deaths of children aged under 5 years as well as the highest levels of malnutrition and poverty, and big disparities of wealth.

The countries where open defecation is most widespread have the highest number of deaths of children aged under 5 years as well as the highest levels of malnutrition and poverty, and big disparities of wealth.

Almost 60 percent of deaths due to diarrhea worldwide are attributable to unsafe drinking water and poor hygiene and sanitation. Hand washing with soap alone can cut the risk of mortality from diarrhea by at least 40 percent.

Diarrhea caused by poor sanitation and unsafe water kills 315,000 children every year.

Between 1901 and 1910 there were 82 recorded disasters, but between 2003 and 2012 there were more than 4,000.

Every year natural disasters kill around 90,000 people and affect close to 160 million people worldwide.

Economic losses attributed to weather-related natural disasters total $3.2 trillion since 1980.

From 1995 through 2014, 89 percent of storm-related fatalities were in impoverished countries, even though these countries experienced just 26 percent of storms globally.

An estimated 446 million people live in fragile and conflict-affected states. These states are poorer, with slower economic growth rates and higher population growth rates than other countries.

Over 10 percent of the population still relies on untreated surface water in 22 countries.

Based on the updated poverty line of $1.90 a day, World Bank projections suggest that global poverty may have reached 700 million, or 9.6 percent of global population, in 2015.

Between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year, from malnutrition, malaria, diarrhea and heat stress.
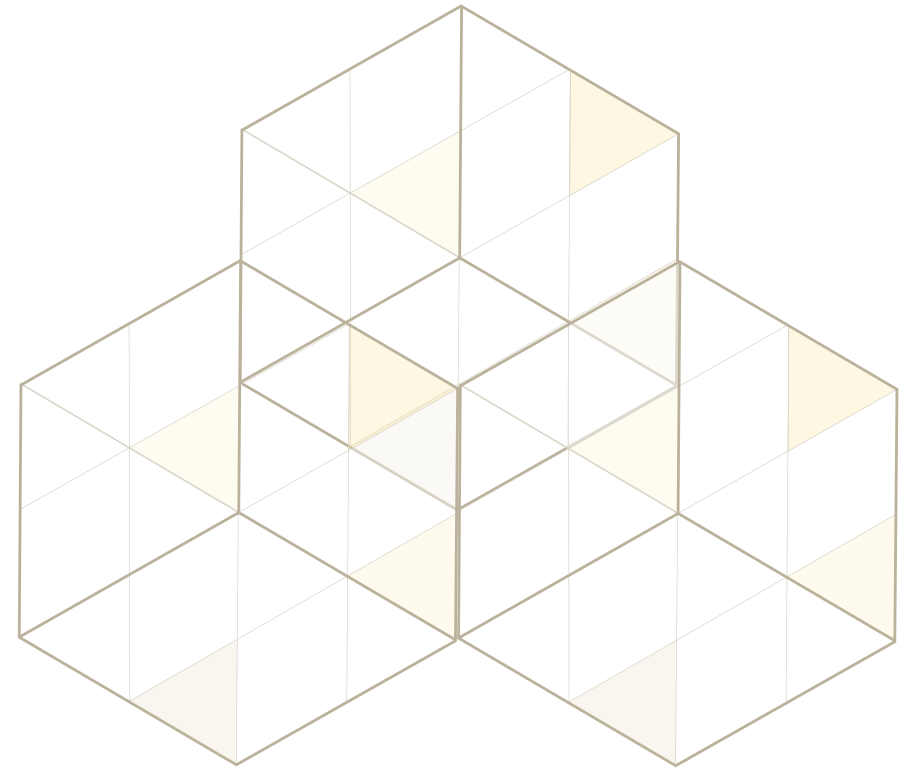
Child Labor

The facts about child labor show that it is a far-reaching problem, especially for children living in poverty around the world. Since children are still developing and impressionable they are extremely vulnerable to those who are looking to abuse and exploit them.

The International Labour Organization (ILO) defines child labor as work that is mentally, physically, socially or morally dangerous and harmful to children; and interferes with their schooling by: depriving them of the opportunity to attend school; obliging them to leave school prematurely; or requiring them to attempt to combine school attendance with excessively long and heavy work.

The Price of Child Labor

There are 168 million children worldwide trapped in child labor, which accounts for almost 11 percent of the overall child population: 100 mil-lion boys and 68 million girls. 1 Around half are working in hazardous work conditions.

Nearly 60 percent of child labor takes place in agriculture.

Forced labor is estimated to generate around $150 billion a year in illegal profits.

There are 75 million young persons aged 15 to 24 years of age who are unemployed and many more who must settle for jobs that fail to offer a fair income, security in the workplace, social protection or other basic decent work attributes.

Former child laborers are much more likely to have only primary education or less.
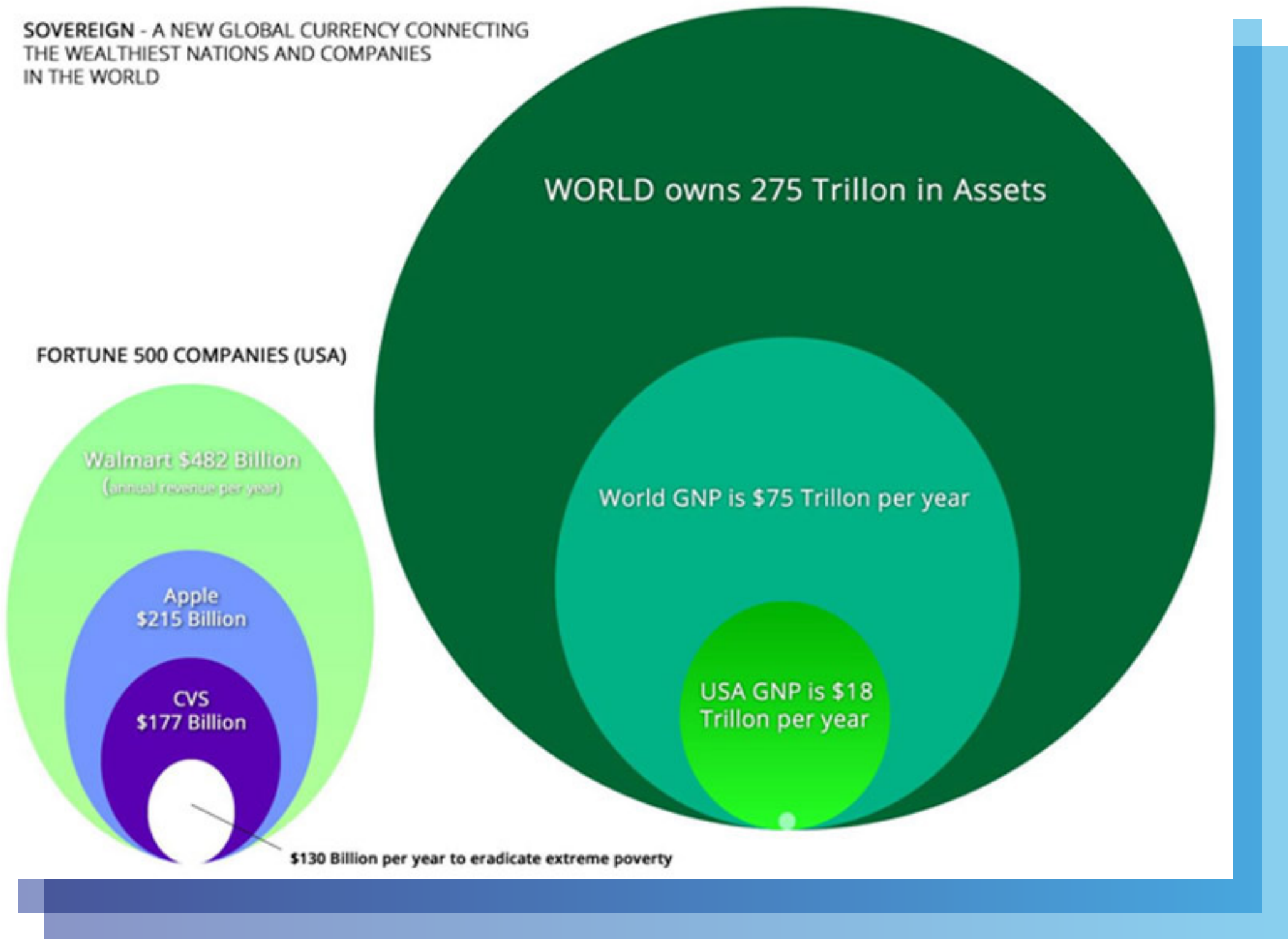
Young persons who worked as children (up to the age of 15) are more likely to be in low-paying jobs.

Children forced by their household circumstances or other factors to leave school prior to their fif eenth birthday are less likely to ever be employed.

Children in hazardous work that directly harms their health, safety or moral development make up more than half of all child laborers, numbering 85 million in absolute terms.

Making the change

The world and commerce sector has the money to achieve this goal. We believe that if a global movement was ignited and set up with infrastructure on the basis of extensively researched case studies and proven results - the commerce world would all come together joining the currency and helping achieve this goal.

SOVEREIGN - A NEW GLOBAL CURRENCY CONNECTING THE WEALTHIEST NATIONS AND COMPANIES IN THE WORLD

WORLD owns 275 Trillon in Assets

FORTUNE 500 COMPANIES (USA)

Walmart $482 Billion
(annual revenue per year)

Apple $215 Billion

CVS $177 Billion

World GNP is $75 Trillon per year

USA GNP is $18 Trillon per year

$130 Billion per year to eradicate extreme poverty

Too little.Too late.

It's obvious from the list that corporate America gives too little to charity. Why is that? A few reasons. They aren't being pressured into giving. We feel if there was a global campaign fronted by celebrities then many charitable donors and large corporations would give more.

How much are the world's 100 biggest companies worth

With the current charity system, if each of these companies gave just 1% of their worth they would raise $160 Billion.

1. Gilead Sciences

Dr. Abhijit Chowdhury, co-founder of the Liver Foundation. *Gilead's 2015 cash contributions: $446.7 million*

2. Walmart

Courtesy of Walmart

Walmart's 2015 cash contributions: $301 million

3. Wells Fargo

Courtesy of Wells Fargo

Wells Fargo's 2015 cash contributions: $281.3 million

4. Goldman Sachs Group

Goldman Sachs's 2015 cash contributions: $276.4 million
It gave away 3% of its pre-tax profits last year, compared with a median of 1% for Fortune 500 companies, according to Chronicle of Philanthropy data

5. ExxonMobil

ExxonMobil's 2015 cash contributions: $268 million
The oil and gas company (XOM, -0.16%) inched up its giving by 13.2% last year.

6. Chevron

Courtesy of Chevron

Chevron's 2015 cash contributions: $225 million

7. Courtesy of Chevron

JPMorgan Chase's 2015 cash contributions: $224 million

JPMorgan Chase (JPM, +0.03%) focuses its social investing on economic opportunity. In 2014, the financial-services firm pledged $100 million in loans and grants to aid economic recovery in Detroit.

8. Bank of America

Courtesy of Bank of America

Bank of America's 2015 cash contributions: $168.5 million

9. Alphabet (Google)

Google's 2015 cash contributions: $167.8 million
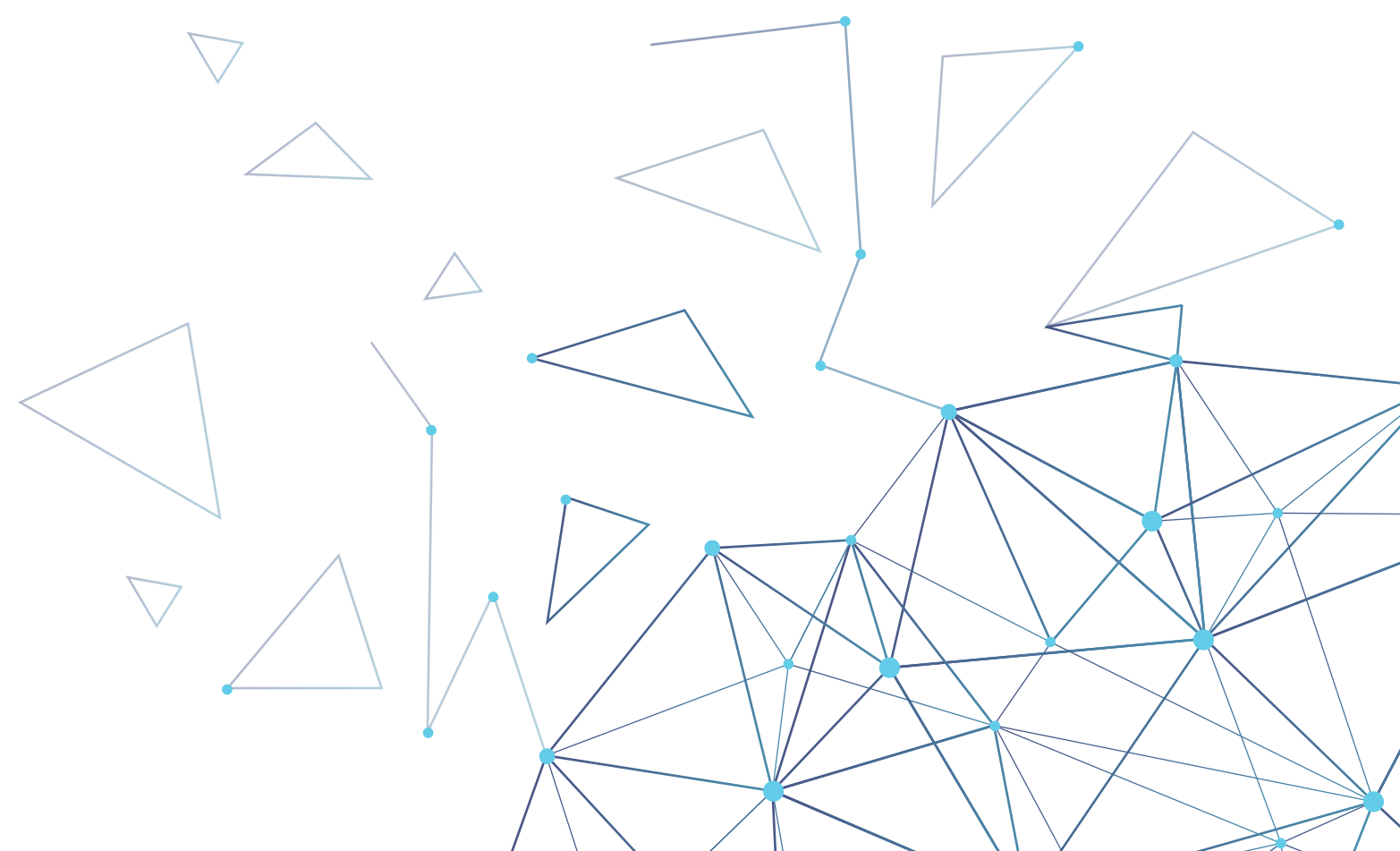
10. Citigroup

Citigroup's 2015 cash contributions: $142.8 million
Citigroup's (C, +0.00%) philanthropy is integrated into its broad-er corporate citizenship strategy.

11. Microsoft

Microsoft's 2015 Cash contributions: $135.2 million
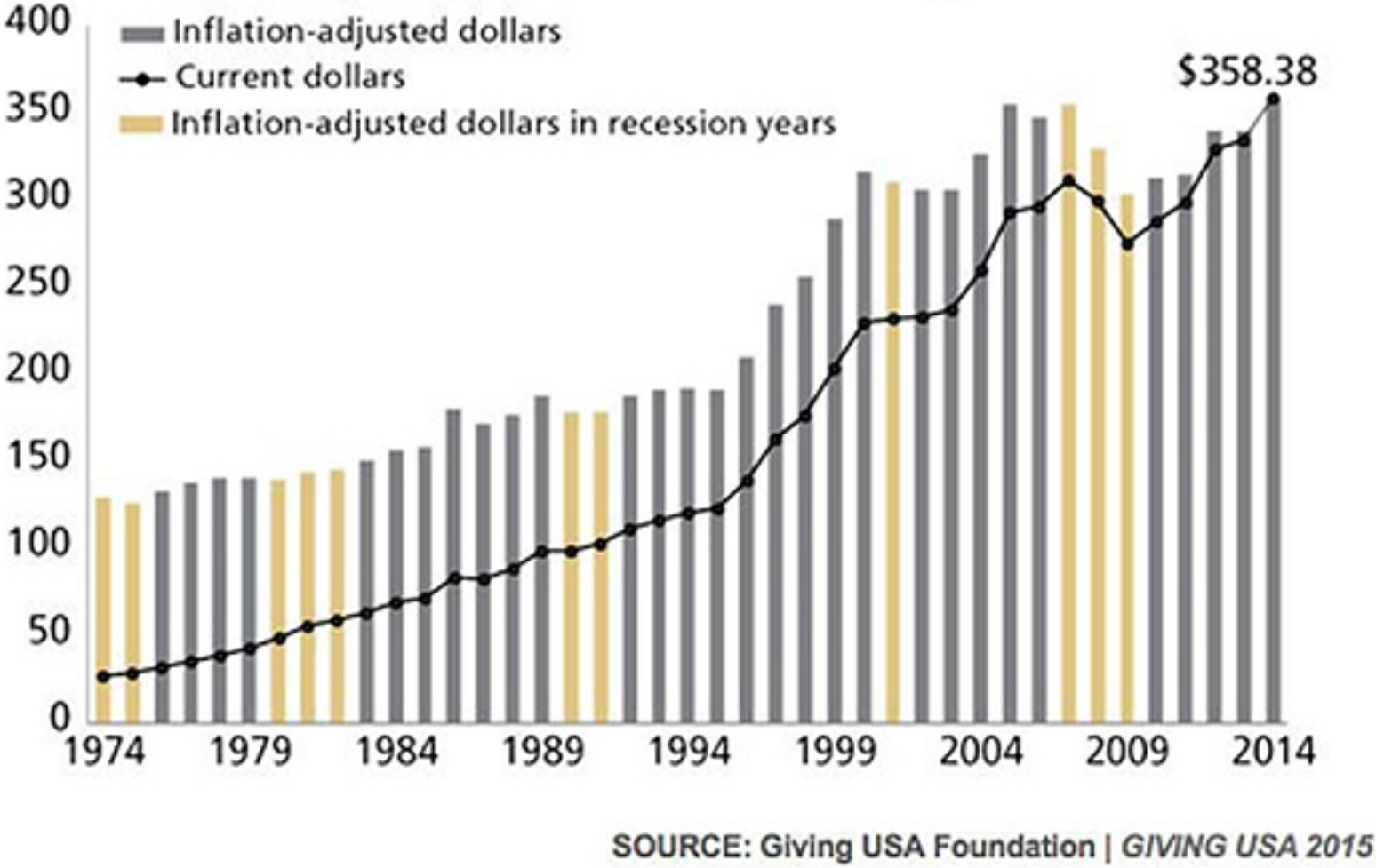Microsoft (**MSFT, +0.56%**) is aligning its giving around its business assets.

We are inherently generous.

Americans have set a new record for charitable giving. U.S. individuals, estates, foundations and companies donated **$373.3 billion** in 2015, according to the annual report *Giving USA*.

Many companies, institutions, and individuals are unclear, unaware, afraid and unsure of cryptocurrencies and blockchain. ICO's an cryptocurrency have received negative press which may affect a company's position on blockchain technology – even if it comprises of breakthrough technology can easily be tar-nished by association of bad news generated by negative press from cryptocurrencies.

The IRS has a limit on charitable donations, but even an individual would like to make donations that exceed the IRS' maximum donation, they may still be able to donate. You may deduct a maximum of up to 50% of your adjusted gross income (AGI) (Line 36 on IRS Form 1040) for the tax year in which the **donation** was given.

Charitable giving hits a record high

- Inflation-adjusted dollars
- Current dollars
- Inflation-adjusted dollars in recession years

$358.38

SOURCE: Giving USA Foundation | *GIVING USA 2015*

Global middle class spending projected to reach **$63.5 TRILLION** by **2030**

Giving just **0.5%** of that is **$319 BILLION**

Global Giving

Charitable donations are decreasing across the globe.

The CAF World Giving Index shows that there has been a decrease in global charitable donations since the last report. This follows a high point recorded by last year's Index, in particular for helping a stranger. The proportion of people across the world who reported donating money in 2016 – is the lowest seen in the past three years.

With as many as 2.4 billion people set to join the world's middle class by 2030, it is crucial that we ensure that the groundwork is put in place to support and encourage a mass engagement in philanthropic giving. We estimate that if the world's middle class were to give just 0.5% of their spending – less than the average UK household gives and about the same as households in the Republic of Korea – it could amount to $319 billion in resources for civil society organizations annually.
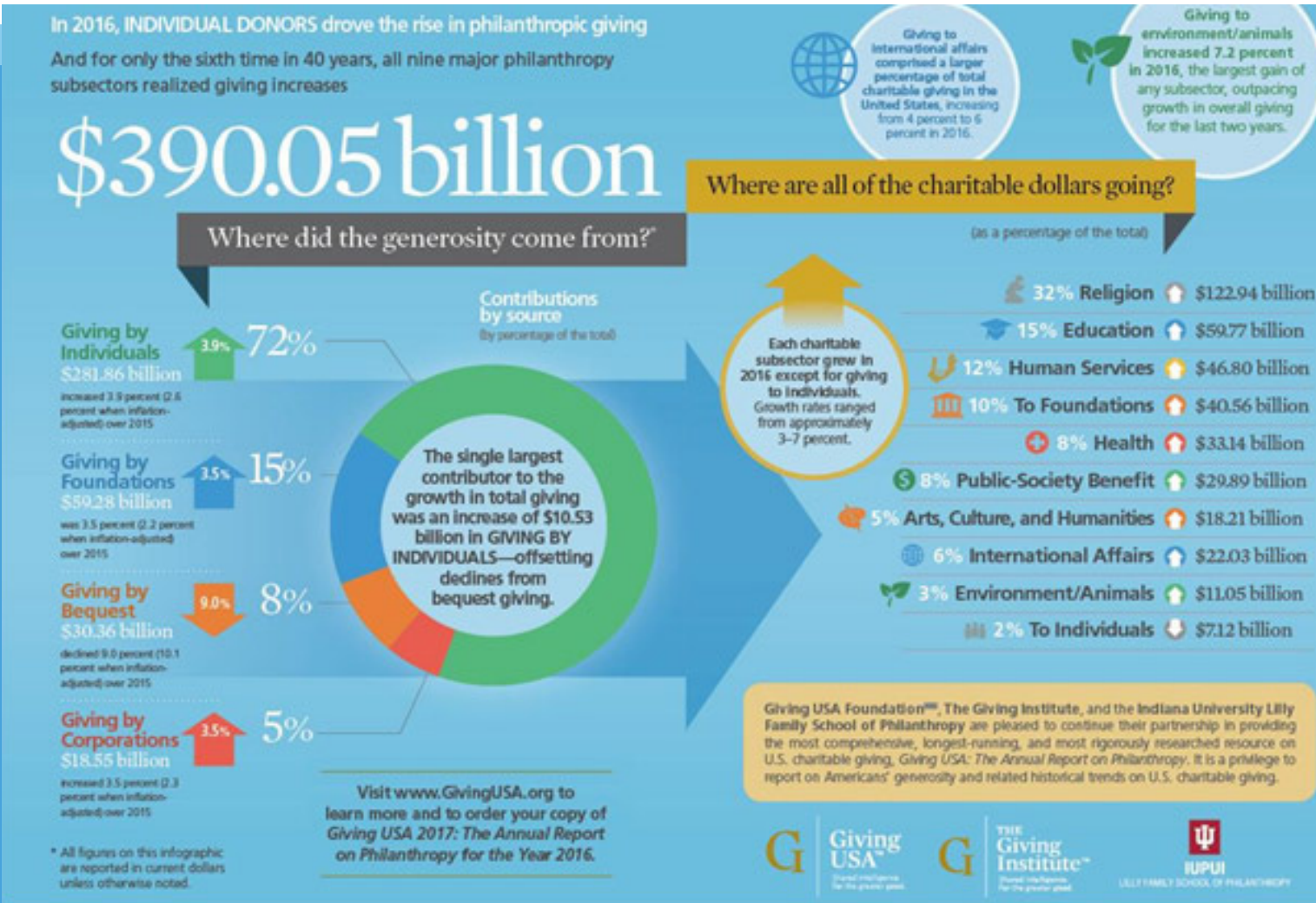

The facts about charitable giving

The average age of a donor in the U.S. is 62.

Total giving to charitable organizations increased to $390.05 billion in 2016.

Historically, charitable giving has risen about one-third as fast as the stock market.

Almost half of U.S. donors (47 percent) give money to three to five organizations and 15 percent give to six or more.

32 percent of all charitable dollars went to religion in 2016, which is more than double any other charitable sector.

In 2016, the largest source of charitable giving came from individuals at $281.86 billion, or 72 percent of total giving, followed by foundations (15 percent), bequests (8 percent), and corporations (5 percent).

About 7.2 percent of overall fundraising revenue, excluding grants, was raised online.

Online giving grew 7.9 percent in 2016.

The average online donation amount in 2016 was $128.

Of all online donations in 2016, 10 percent were $1,000 or more.

In 2016, 17 percent of online transactions were made using a mobile device.

December remains the top grossing giving month of the year followed by June.

Online giving in December increased for the second consecutive year and represented 21.8% of all online giving.

Top five reasons why people give:

💸 To meet critical, basic human needs

💸 To give back to society and make the world a better

💸 place The belief that those with more should help those

💸 with less To bring about a desired impact or result

💸 A request for money was made

Table 2. Top 20 countries in the 5 year CAF World Giving Index, with score and participation in giving behaviours.

	CAF World Giving Index 5 year ranking	CAF World Giving Index 5 year score (%)	Helping a stranger 5 year average (%)	Donating money 5 year average (%)	Volunteering time 5 year average (%)	CAF World Giving Index 1 year score (%)	Difference between 1 and 5 year score (%)
Myanmar	1	64	53	90	50	65	1
United States of America	2	61	76	62	44	56	-4
New Zealand	3	59	66	68	43	57	-2
Canada	4	58	66	66	41	54	-3
Australia	5	57	66	68	38	56	-1
Ireland	6	56	61	67	39	53	-3
United Kingdom	7	54	62	71	30	50	-4
Sri Lanka	8	54	58	55	48	n/a	n/a
Netherlands	9	53	55	69	35	51	-2
Indonesia	10	52	42	70	42	60	9
United Arab Emirates	11	51	71	59	23	51	0
Kenya	12	51	71	41	40	60	9
Bhutan	13	50	53	58	40	n/a	n/a

Charitable giving accounted for 2.1% of gross domestic product in 2016.

Historically, charitable giving rises about one-third as fast as the stock market.

Approximately 91% of high net worth households give to charity.

On average, high net worth donors gave $25,509 to charity in 2015. By comparison, households in the general population gave $2,520 on average.

Volunteering (Individuals)

Approximately 63 million Americans — 25 percent of the adult population — volunteer their time, talents, and energy to making a difference. Total giving rose 2.7 percent in current dollars (1.4 percent adjusted for inflation) from the revised estimate of $379.89 billion for total giving in 2015. (Please see below for a more detailed breakdown of the numbers for each philanthropic source and sector.)

The UK public donated £9.7 billion to charities last year, according to CAF's latest UK Giving report, with 61% of people donating money. Another way that generosity can be calculated is by looking at the percentage of GDP that each country gives.

This is led by Northern Europe. Sweden gives the most as a percentage of GDP, at 1.12%,followed by Norway (1.06%), Luxembourg (1.01%), Denmark (0.88%), and the Netherlands (0.82%). In fact, all of the top nine are in Northern Europe, with all the Scandinavian countries, Luxembourg, the Netherlands, Belgium, Finland, Ireland and the United Kingdom. The top non-European country in this list is Canada, which is only placed fourteenth, and donates less than one-third of a percent of their GPP (0.30%). Although the United States gives the most in terms of monetary amounts, they only give 0.20% of their GDP and are nineteenth on the list.

Donor-Advised Funds – WHY AREN'T THEY RELEASING THEM

There were 284,965 donor-advised fund accounts in 2016.

Donor-advised funds held $85.15 billion in assets in 2016.

Annual contributions into donor-advised funds were $23.27 billion in 2016.

Donors recommended grants from donor-advised funds totaling $15.75 billion to charities in 2016.

"CharityWatch believes it is reasonable for a charity to set aside less than three years of its annual budget for financial stability and possible future needs. When a charity's available assets in reserve exceeds three years of its annual budget, CharityWatch downgrades its final letter grade rating. However, we continue to show what a charity's efficiency rating was prior to being downgraded for those donors who do not wish to factor a charity's high assets into their giving decisions.

Cost to raise charity funds: "CharityWatch believes it is reasonable for a charity to set aside less than three years of its annual budget for financial stability and possible future needs. When a charity's available assets in reserve exceeds three years of its annual budget, CharityWatch downgrades its final letter grade rating. However, we continue to show what a charity's efficiency rating was prior to being downgraded for those donors who do not wish to factor a charity's high assets into their giving decisions.

Program%	Cost to Raise $100	Efficiency Rating
90-100%	$0 - 4	A+
80 - 89%	$5 - 11	A
75 - 79%	$12 - 15	A-
72 - 74%	$16 - 19	B+
68 - 71%	$20 - 26	B
65 - 67%	$27 - 30	B-
61 - 64%	$31 - 33	C+
56 - 60%	$34 - 37	C
50 - 55%	$38 - 40	C-
36 - 49%	$41 - 59	D
0 - 35%	$60 - 100	F

SovereignSky will be extremely accessible to the public because all it costs us is an app update.

Treatment of High Assets

Giving is a fixed pie, remaining steady at about 2% of gross domestic product (GDP) for over four decades. Because charitable dollars are limited and society's needs are not, it is vital that charities do not hoard the funds they raise. When a charity sets aside excessive funds for possible, future needs that may or may not ever occur, this makes these funds unavailable for other charities to use to address more urgent needs. Charities that hoard donations are in some cases ignoring the intentions of donors who contributed in response to a solicitation for a charity's current programs, not programs that might be conducted five, eight, or even ten years in the future.

CharityWatch believes it is reasonable for a charity to set aside approximately three years of its annual budget for financial stability and possible future needs. When a charity's available assets in reserve exceed three years of its annual budget, CharityWatch downgrades its final letter grade rating. However, we continue to show what a charity's efficiency rating was prior to being downgraded for those donors who do not wish to factor a charity's high assets into their giving decisions.

Example: If a charity spends about one million dollars annually, CharityWatch will not downgrade the charity's rating for high assets as long as it has less than three million dollars of available assets in reserve. CharityWatch reduces the letter grade ratings of charities holding available assets in reserve equal to between 3 and 4 years of their annual budgets. CharityWatch downgrades to an F rating any charity holding available assets in reserve equal to 5 years or more of its annual budget.

CharityWatch's computation of available assets is not as simple as dividing a charity's net fund balance by its total operating budget. Rather, we conduct a review of a charity's Tax Form 990 and Audit balance sheets and prior to performing our end calculation of available assets, subtract out items such as the equity in land, buildings, and equipment used in operations; construction in progress; permanently restricted funds; accounts receivable due in greater than five years, and assets that a charity is prohibited by an outside party from using. We do not subtract out cash, investments, temporarily restricted, boardrestricted, and other funds that the charity could use if it chose to do so. We also review audit notes for information related to assets, such as imminent and specific plans for large, capital outlays for which the charity is holding funds in reserve or to see if the charity received an unusually large donation during the fiscal year that it would not reasonably be able to spend by the end of the fiscal period.

Top 20 most valuable companies by market capitalisation
Source: PwC / Bloomberg
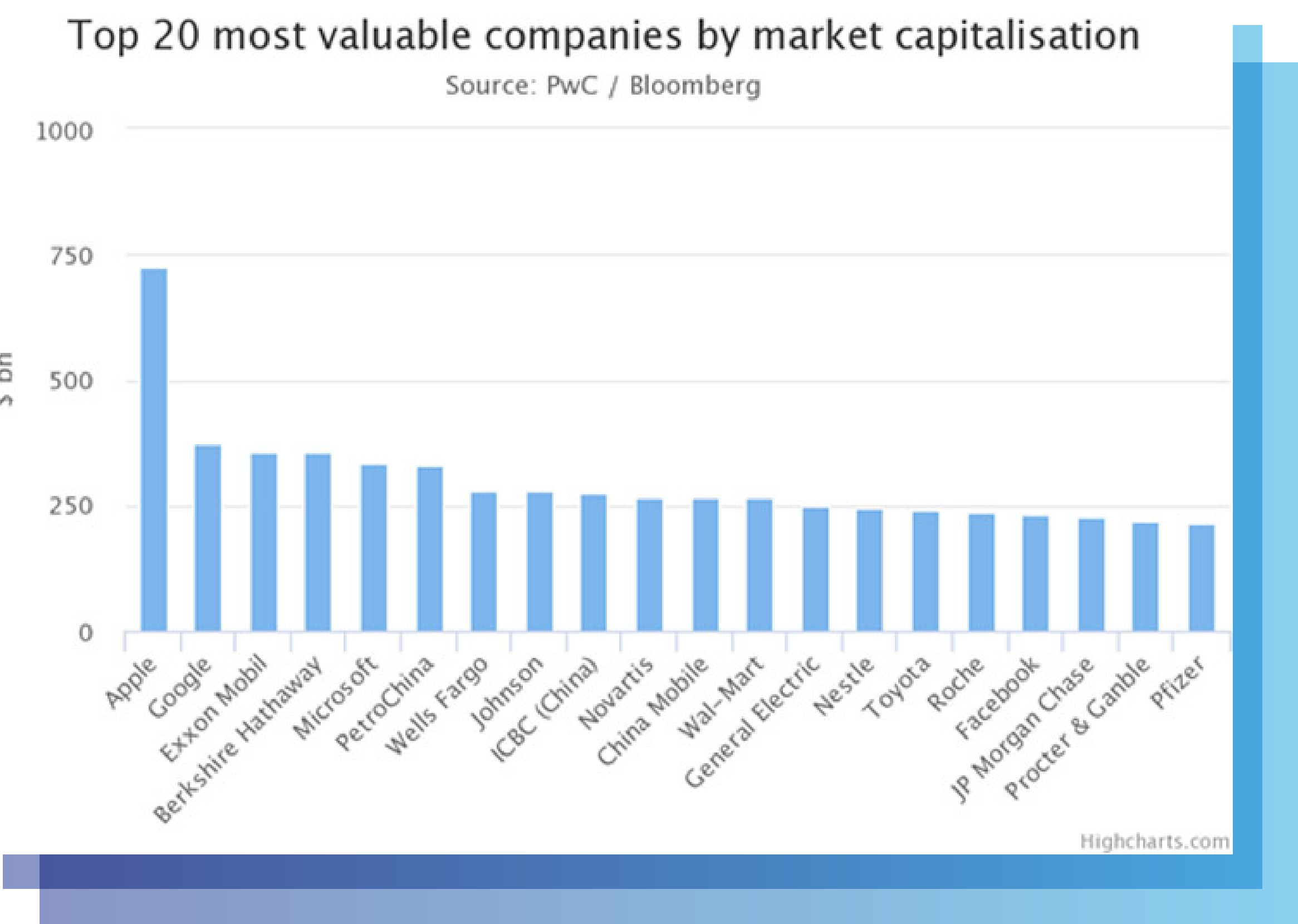
30. Previous Solutions

Even the world's very first cryptocurrency, Bitcoin, was conceived with the idea in mind that unnecessary barriers that encumber the traditional banking system need to be removed. However, after Bitcoin, a multitude of alternatives (Altcoins) have sprung up, and, while this competition is beneficial in many respects, it has not led to the development of a currency that is suitable for the purpose of better market access for the world's poor, as described above.

Even so, there have been numerous attempt not to replace traditional banking with cryptocurrency, but to make traditional banking more transparent and efficient on the blockchain. One of these attempts is Ripple, a non-mining cryptocurrency and financial network. While Ripple introduces many intelligent features – such as the use of IOU's that are applicable for any currency, not just for the native XRP currency – it also has major drawbacks that have been criticized in cryptocommunities. It is controlled by a single, profitoriented company, and it does not seem to be especially well-suited (or encouraging) to its adoption by small businesses. This adoption, however, is crucial to SovereignSky's mission to abolish poverty.

Another important issue for comparable blockchain projects is scalability, especially with regard to transaction confirmation speed. Most blockchain projects emphasize speed – SovereignSky does not. As SovereignSky plans to allow transactions up to billions in volume, speed only takes second place to reliability. Still, SovereignSky aspires to have a reasonable transaction confirmation time of a maximum of 12 hours.

31. Sovereign Strategic Partners

M1: Help Eradicate global poverty by 2030

Much of today's poverty around the world is not caused by a real scarcity in resources or natural disasters, which are given more attention and headlines in the news, but by a widespread inequality in opportunity to access worldwide markets.

A unified cross-border cryptocurrency such as SovereignCoin could potentially work in sync with an online marketplace system that allows users easy access to the worldwide markets – whether it is from a corporation's data center or a single farmer's mobile phone. It will allow micro-transac-tions as well as single transactions up to billions in USD.

SovereignSky proposes an international cryptocurrency explicitly designed to create a fair, worldwide economy for the benefit of everyone. A unique system to abolish global poverty and benefit developing and developed nations alike. This ambitious goal cannot be achieved without SovereignSky's strategic partners.

Legal Disclaimer

General Information

[SOVEREIGN] is not, nor is it intended to, constitute a security, an investment scheme, financial instrument or any other regulated product in any jurisdiction. This white paper is not, nor is it intended to constitute, a solicitation, prospectus, offer document for investment and does not pertain in any way to an offering of securities, an investment scheme, a financial instrument or any other regulated product in any jurisdiction. Please note that purchases of **[SOVEREIGN]** are final and non-refundable. Individuals, businesses, and other organizations should carefully weigh the risks, costs, and benefits of acquiring **[SOVEREIGN].**

Limitation Of The Purchasers

You are not eligible to and you shall not purchase **[SOVEREIGN]** through the private sale if you are a citizen or resident (tax or otherwise) of any country or state where the purchase of **[SOVEREIGN]** or similar cryptocurrencies or tokens, may be prohibited or the token sale is deemed to be non-compliant with the applicable laws and regulations. For clarity, natural persons and entities that are a resident of (tax or otherwise), domiciled in, or have a connection to, the United States of America, Canada, the People's Republic of China, New Zealand, Japan or Hong Kong are expressly prohibited from participating in the token sale and purchasing **[SOVEREIGN]** Purchases of **[SOVEREIGN]** should be undertaken only by natural persons, entities, or companies that have significant experience with, and a sophisticated understanding of, the usage and intricacies of cryptographic tokens and blockchain based soft are systems. Purchasers should have functional understanding of storage and transmission mechanisms associated with other cryptographic tokens. Any entities related to **[SOVEREIGN]** and officers and employees thereof will not be responsible in any way for loss of any cryptographic tokens, **[SOVEREIGN]** or fiat currency resulting from actions taken by, or omissions of, the purchasers. If you do not have the required experience or expertise, then you should not purchase **[SOVEREIGN]** or participate in the token offering. You should carefully consider the risks, costs, and any other demerits of acquiring **[SOVEREIGN]** and, if necessary, obtain your own independent advice in this regard. If you are not in the position to accept nor to understand the risks associated with this token sale, or any other risks as indicated in this whitepaper, you should not acquire **[SOVEREIGN]** until such that you have received the necessary independent advice.

Risks

The purchase of **[SOVEREIGN]** carries with it risk. Prior to purchasing **[SOVEREIGN],** the purchaser should carefully consider the risks listed below and, to the extent necessary, consult a lawyer, accountant, and/or tax professional prior to determining whether to purchase **[SOVEREIGN]**

(a) **[SOVEREIGN]** will be stored in a wallet, which can only be accessed with a password selected by the purchaser, if a purchaser of **[SOVEREIGN]** does not maintain an accurate record of their password, this may lead to the loss of their tokens. As a result, purchasers must safely store their password in one or more backup locations that are well separated from the primary location.

(b) The purchaser recognizes that some of the services in **[SOVEREIGN] 's** ecosystem are currently under development and may undergo significant changes before release an/or made available for use. The purchaser acknowledges that any of its expectations regarding the form and functionality of the **[SOVEREIGN] 's** Platform and associated services may not be met for any number of reasons.

(c) The purchaser understands that while **[SOVEREIGN]** will attempt to list the **[SOVEREIGN]** token on most major cryptocurrency exchanges, it is possible that some exchanges may decline to accept, which may result in somewhat less liquidity provided through to **[SOVEREIGN]** than expected in this whitepaper.

(d) As with other cryptocurrencies and cryptographic tokens, value of **[SOVEREIGN]** may fluctuate significantly and become reduced in value (including to zero value) for any number of reasons, including but not limited to, supply and demand, overall market conditions, political or geographical reasons, changes of regulations in any jurisdictions, and technical reasons.

(e) **[SOVEREIGN]** will be issued on the **[SOVEREIGN]** blockchain. As such, any malfunction or unexpected functioning of the **[SOVEREIGN]** protocol may impact the purchaser's ability to transfer or securely hold **[SOVEREIGN] .** Such impact could adversely affect the value.

Disclaimer

To the maximum extent permitted by the applicable laws, regulations and rules, **[SOVEREIGN]** any entities of the **[SOVEREIGN]** ecosystem, and officers and employees thereof shall not be liable for any direct, indirect, special, incidental, consequential or other losses of any kind, in tort (including negligence), contract, statute or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this whitepaper or any part thereof by you. **[SOVEREIGN]** and any related entities and officers and employees thereof shall not be liable for any loss of **[SOVEREIGN]** after it is transferred to you by any reason including but not limited to your failure to maintain or backup an accurate record of your password or password cracking by somebody due to your poor maintenance of your password. Any person undertaking to acquire **[SOVEREIGN]** acknowledges and understands however that **[SOVEREIGN]** (does not provide any warranty as to the release of any exchange or any of the other technical features or services contemplated under this whitepaper. You acknowledge and understand therefore that **[SOVEREIGN] (**including its associated bodies corporate, officers and employees) assumes no liability or responsibility for any loss or damage that would result from or relate to the incapacity to use **[SOVEREIGN] .** Regulatory authorities are carefully scrutinizing businesses and operations associated to cryptocurrencies and tokens in the world. In that respect, regulatory measures, investigations or actions may impact future business and may limit or prevent it from developing its operations in the future. Any person undertaking to purchase **[SOVEREIGN]** must be aware that the **[SOVEREIGN]** business model (to be interpreted in its widest sense), and its existing platforms may change or need to be modified because of new regulatory and compliance requirements from any applicable laws in any jurisdictions. In such case, purchasers and any person undertaking to acquire **[SOVEREIGN]** acknowledge and understand that neither **[SOVEREIGN]** nor any of its affiliates shall be held liable for any direct or indirect loss or damages caused by such changes. This white paper and any other materials or explanations made by **[SOVEREIGN]** and its officers and employees shall not and cannot be considered as an invitation to enter into an investment. They do not constitute or relate in any way nor should they be considered as an offering of securities, a financial instrument, an investment scheme or any other regulated product in any jurisdiction. This white paper does not include nor contain any information or indication that might be considered as a recommendation or that might be used as a basis for any investment decision. Neither **[SOVEREIGN]** nor any of its officers and employees are to be or shall be considered as advisor in any legal, tax or financial matters. Acquiring **[SOVEREIGN]** shall not grant any right or influence over **[SOVEREIGN]** organization and governance to the purchasers.

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