

"Every noble work is at first impossible"

Thomas Carlyle



NEAPCOIN



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As founding of a country and forming of an efficient economical system and legal framework is a complicated and sometimes delicate process the information outlined here are subject to change to accommodate new information and circumstances.

Introduction

The Neap Coin, abbr. **NEAP**, is the first sovereign national crypto currency in the world. It is based on decentralized concepts of the blockchain technology, more specifically on:



Ethereum network (31) (32), which is the second largest and most sophisticated smart contract platform. It is implemented according to ERC 20 standard (30), As an ERC 20 token, it inherits a delegated Proof-of-Stake consensus (33). The standard is used in many other successful and secure cryptographic (abbr. crypto) tokens such as dollar pegged stablecoins Gemini dollar , USD coin or PAX and other strong projects such as EOS.



Mining NEAP? It is not necessary to mine like Bitcoin. Only 100 million will be ever created and distributed. NEAP is backed by the kingdoms assets that are currently standing at about 100 million US dollars.



Fifty seven % of the coin issuance will be kept by the KNS government in its treasury and reserve funds by the Dev. Foundation and others.



Asset backed currency NEAP will be propped up by the KNS Treasury that will be buying back any coins being offered for below 1 US dollar.



NEAP is freely tradable tanks to the ERC 20 standard. It can be exchanged for other coins or fiat money on centralized or decentralized exchanges or simply any venue where at least 2 parties meet with the intension to exchange NEAP for whatever the parties deem fit.



Explanation of Cryptocurrencies and NEAP for layperson

NEAP as other cryptographic tokens lives in an ever growing accounting ledger (the blockchain), which is fully digital, like a big spreadsheet, and contains all the transactions and holds all the records corresponding to the respective coin accounts holding the coins by different entities, such as you.



The record of the amount of the coins one holds represents the monetary holdings themselves, similar to the numbers representing the amounts of the regular old money (so called fiat money) in your internet savings account.

The owner must have a so called private key (a password), that fits only that one account (so called address in the blockchain), for being able to transfer/spend the coins on the account. This key is usually held by the owner in so called wallet (another piece of software sitting on your phone



or PC), which makes it safer than just holding the bare key. The private key is very much analogous to your email password, only the person knowing the password can work with the content of the email account so as only the private key owner can transfer and spend the coins at the corresponding coin account.

One can also simply print the private key (as one can do with email passwords etc.), delete it from own phone and effectively keep the only access to the owned coins in the physical world. When the coins are needed the key must be put back into a wallet that unlocks the record of the respective coin holdings registered in the ledger (the blockchain).



Every transaction and account address is being verified all the time by thousands of so called nodes, that are just larger computers distributed around the world, and belonging to different individuals, independent groups, organizations and institutions (you can install such a node on your computer too and help facilitate this process).

The distributed nature of this network thus the verification process makes the crypto currencies more resistant to local government policies or interferences from different influential malicious groups.



Addressed problems and offered solutions

Problems

Baggage of Legacy Fiat currencies

- In centralized banking systems of Fractional Reserves, applied to all national fiat money, commercial and central banks inflate money supply by *printing* new fiat money, that exist only on their balance sheets and which are backed by less than 10% of real depositors' money (often just 1% or 0%). The compound interest, charged on loans (or loan defaults), forces an unbound ever growing inflation-of the monetary base and money devaluation.

Most peoples' **cash and bank savings lose value rapidly** for example between the years 2000 and 2019 peoples' unspent cash lost more than half of the value! Vast majority of **bank savings** (even the corporate's) accounts **do not pay any positive interest**; instead the banks impose sneaky **fat fee structures** and **extreme credit/loan interest** to be paid by the borrowers (usury). If any positive interest on deposits exists it is about 10 to 50 times lower than the opposite inflationary rate (!) eating away the buying power of your savings.

Only rich and privileged people that can afford money managers and active style of moving assets and investing can partially protect their cash (if they are lucky or their manager is really good - and it is shown that on average they are unable to beat inflation entirely). At the end of the day **holding cash long term is no good to anyone**, rich or poor.

- In ancient Mesopotamia for an ounce of gold one could buy almost the same amount of bread or rice as you can buy for an ounce these days. Conversely in the 1960's bread cost about 8x less in the monetary face value than in 2019. In the developed countries this effect is mitigated by growth of wages slightly above the inflationary rate of growing prices, but in the developing world this is often not true for long periods of time when **prices** especially those of **food outpace average growth of wages** causing severe **plunge in living standards**.
- In addition when a large number of depositors claim back their deposits suddenly -a so called **bank run**- (as happens during times of panic and insecurity like in 1933 and many times during and after 2008) the **bank** has only a small fraction of peoples real deposits to pay out and goes **bankrupt** or it is **bailed out** by the government with the taxpayers money thus the banks'

shareholders are saved and the **depositors have to simply accept they lost their money.**

- **Running a physical system of currency** itself **costs** considerable amount of money; it cost US Federal government **826,665,000 USD** to get new physical money into circulation in the year 2014 (the sum is similar every year) (1). Additionally worn and damaged currency units need to be also disposed of in considerable cost.
- It is **not** all that **safe** as one may think to **store larger sums of money** in your mattress or a commercial bank account since both places can get robbed or discovered by your spouse who like the banks can go **bankrupt and erase your holdings** too. Either scenario has not been an uncommon occurrence since ever and especially since 2008.
- As a sole centralized player **Government** can **devalue fiat currency**, whenever it feels it is necessary.
- The **digital centralized infrastructure** is more **prone to disruption** and total destruction, as in if a commercial banks servers fail fatally along with its centralized accounts and transactions databases and backups there is **no claiming back** any **deposits** or loans, for that matter, because where there was the bank and its datacenter there is a crater now.
- **Bank transfers grant zero to none privacy** although cash does if you can get it to the recipient. Malicious actor such as a business competitor can get very good model and fitness estimate of your business if they really try. And your neighbor working at your bank or with the right government privileges can find out some delicious bits about you and your family too.

Solutions **Innovating currencies and banking system through NEAP**

- Decentralized and distributed **cryptocurrency** is being continuously **verified** by a **collective of independent entities**, it is very hard for a single malicious agent to assume full control and manipulate the system. All parameters of the cryptocurrency are public and defined at creation.

The **distributed and decentralized architecture** guarantees much greater degree of **robustness to disruption** or total distraction. If a nuclear bomb



wipes half of a country the rest of the blockchain infrastructure still holds all the information, necessary for it function.

It is much **more efficient to manage NEAP** than a **physical** or **digital fiat**. There is no expensive logistics chain needed for the issuance or disposal of damaged money.

Moving and storing NEAP is accommodated by the decentralized **distributed network** of computers all **over the world**, so it makes **no difference where** you are **sending your coins**, because your coins are literally everywhere at the same time (on the distributed blockchain). It is truly the non-local principal in action.

- It is a very **private system** pertaining to your account and transactions similar to using regular physical cash unless the coin address you used is linked back to you by an indiscrete or sloppy payer or recipient. Do not trust the impeccable anonymity claims of any other ERC 20 crypto.
- Whether you hold an equivalent of **1000 or 10 million US dollars'** worth in NEAP it can still **fit in your pocket**. If you are forgetful or just want to be smart and safe you can **keep all yours NEAP in many wallets** and at the end of the day they will still fit in your pocket. Yours deeply in debt spouse or sibling can't get it and your bank won't see a dime of it.
- One can **keep NEAP in the physical world without** the need for a **computer** and a constant **internet access**. It is a common misconception. If you want to spend it though, you either must get the transaction on the blockchain again or transact the whole single wallet with an *"off line recipient"* (similar to handing over a banknote); you are effectively handing over your private key to the transacted coins; the recipient must trust you or just find you letter... 😊
- **NEAP is backed by real assets** unlike all fiat money. At the pre ICO time it is IP, Real estate outside of KNS, cash, capital markets investments equivalent to the value of about **100 million USD**. The natural resources of KNS are not included in this number.
- NEAP and KNS incorporate and instill mechanisms and features considerably lowering the inflationary pressures. See in the text.

- You do **not** need a bank. What suffices is a **PC**, a **phone** (even without the internet) or a **piece of paper** with the private key for the address with the sum you want to spend.

The transaction **fees** are much, much lower than with a Bank or other payment processor. Sender has a partial **control over** the **fee**; the expedience of the transfer is correlated to the fee size selected by the user. The **fee amount** is **independent** of the **amount of coins** sent or the physical distance to the recipient - transferring across the world or paying in a local store will yield the same transaction conditions. The fees go to the Ethereum foundation maintaining the blockchain and its code base.

About KNS And the rest is history

The 795 square mile Bir Tawil region of Northern Sudan and Southern Egypt has been classified terra nullius since 1902 when current national boundaries were drawn between Egypt and Sudan.

The century-long border dispute between Egypt and Sudan left the Bir Tawil Region as the only unclaimed land on Earth outside of Antarctica.



Seeking to build a new, ecologically sustainable nation, Jeremiah Heaton undertook an expedition to the Bir Tawil region so that an official sovereign claim could be made in compliance with International Law.

On June 16, 2014, on the 7th birthday of his only daughter Emily, Jeremiah Heaton planted the official national flag of the Kingdom of North Sudan in the newly established capital of Bir Tawil, North Sudan. The Kingdom of North Sudan is established as a de facto nonpartisan unitary parliamentary monarchic directorial republic with the primus inter



pares King Jeremiah Heaton serving as the head of state and government together with council of equals elected by the parliament (this form of rule will come in effect after 3000 citizens inhabit the country).

Legislature

LAW & ORDER

Until the number of inhabitants reaches 7000 the International law will be the primary legislative framework augmented and amended by KNS regulations and decrees set by the governing council (similar to city councils). The legislation will be primarily adopted from national law systems with proven strong merits, effectiveness and functionality. Laws will be continuously modified and adopted to the local need and de novo legal infrastructure will be created by outsourcing to law firms, world authorities in respective law fields. All these stages will be gradually implemented in AI manager, regulator, security overseer and eventually creator and executor of the law (regulated by institution of human ombudsmen and state security forces). During the transitional era crime perpetrators will be evicted to their countries of origin or those that issued a warrant.

Diplomacy

Achievements in politics and diplomacy

The Kingdom of North Sudan is currently building **diplomatic, trade and security relationships** with its northern and southern **neighbors**. The meetings has involved top government representatives such as Egypt's Defense mister Mohamed Zaki and Sudanese government members KNS has applied for United

Question of colonialism and exploitation of the indigenous peoples

Nations Observer Entity status and is in the process of negotiating full acknowledgement and membership with the **African union**.

Bir Tawil was not a country nor does it have a population. Establishment of KNS as a new country is not an act of colonialism as this would mean that another country takes over of another national state for purposes of exploitation of people and resources. The actions of the king of KNS do not fit these intentions and the definition and exploitative ideology of colonialism in any way. Jeremiah's intention has been the establishment of a **new national state**, something that has not been seen using *terra nullius* land in hundreds of years. The first settlers will be selected based on their potential to fulfill the settlement's basic self-sufficiency within the first decade not based on their national or racial background.

The Kings vision

The King's **Jeremiah vision** is a mostly urbanized **knowledge based society** in the desert oasis that maximizes the use of space while facilitating comfortable healthy living, **efficiency** in production of **water, food, energy, waste** management, overall **resource** sustainability and **economic growth**. State and society for people who have a love for this Earth that wants to work to help advance these goals through. Jeremiah believes to one day **foster innovation** and efficiency in a very similar way to how Elon Musk developed the electric car or his Space program platform in extremely short time span though he concedes that the difference between him and Elon is that we need to raise the money. This NEAP ICO is part of this effort,

The estimated **amount of investment**, that is directly correlated with the **value** underlying **NEAP**, sufficient for the **formation** of the self-progressing and **sustainable KNS economy** is estimated to be between 850 to 1100 million USD or 8.5 USD per 1 NEAP to 11 USD per 1 NEAP if all the money were to be raised by this ICO (the path to the necessary funds is outlined further in the text).

Asset collateralization of NEAP

The concept of backing national currency with tangible reserve assets was abandoned by every government during the last century leaving value of money to pure faith and the word of assurance from the governments. The gold standard abandonment contributed to wild economic turmoils, profound swings in relative currency valuations, massive systemic commercial and/or reserve banking frauds, enriching few and destroying lives of hundreds of millions impoverishment; it lead to

Commodity- backed money



Figure 1 Gold standard coins of abandoned Scandinavian monetary union

Regulation of the economy with Artificial intelligence

hyperinflations and bankruptcy of whole nations.

One of the commitments of the KNS science and research program will be development of near real time regulation of its economy, regulating much more efficiently (then contemporary state governance systems) balance between resource availability and sustainable growth while taking cues from uncountable observable and hidden variables affecting inner dynamics of economy systems. See further in the text. Similar systems will be developed for general country governance.

Similar predictive (and regulatory) systems already operate in political, socio-economical etc. systems and are either kept private or are sold to large corporations, investment banks and more enlightened governments agencies. They are capable of predicting with solid accuracy geopolitical event or even violent crimes on a local urban scale.

This may seem as a tall order but KNS believes in not so distant attainability of this kind of an economical command through the development of unprecedented economic models enabled by the tremendous advances and the

rate of progress manifested in machine learning and artificial intelligence systems, abbr. AI, acting on *big data*.

Many contemporary AI applications were in the realm of wild science fiction just 10 years ago today they are part of everyday lives.

Also Quantum computing has gotten to the phase where first machine learning tasks has been implemented and successfully run on small registries of entangled cubits (2). When QC is coupled with AI transferred from standard computers we are getting in a very speculative territory about its potential although we are only about 5-15 years away.

These **technologies** will **disrupt** our world on the (r)evolutionary scale and **KNS** will strive to be at the forefront in testing, applying and **actualizing the vision**.

KNS is not going to idly wait for the golden grail in the form of an ultimate AI Oracle and is committed to gradual **enhancement** of the economic growth and its stabilization, ergo NEAP's **buying power** (its projected relative price to other currencies and assets or commodities), through application of the **current AI** systems, internet of things, abbr. **IoT**, big data tech., wireless communications and other advanced and even fringe technologies.

These beliefs are based on the absolutely remarkable and already **tangible progress** of the **machine learning and AI systems** that are being achieved these days. (7) (8)

Full reserve banking system

NEAP is restoring the system of backing money by reserve assets model and is swapping fractional reserve banking system (even coined by many economist and intellectuals as a fraudulent concept benefitting only banker "elite") for a **modified form of full reserve system**, where banks must keep all deposited funds in-house and money cannot be created out of thin air (which is the process every commercial bank in the world uses when creating new loans).

The Central Bank of KNS will issue **loans** only from its investment collateralized assets and cash lending fund, so will the commercial financial institutions in KNS. The cost of loans will be regulated by KNS' treasury. Some years down the line co-regulated and later fully regulated by the central economic **regulatory AI** system.

Structure of the NEAP reserve fund

As every sovereign country KNS will as well keep financial reserves, but unlike the reserves of most the other countries KNS is actually **backing** its national legal tender **Neap**. (Although not readily convertible as some reserve assets are non-fungible e.g. real estates or IP).

Ironically part of The Kingdoms reserves shoring NEAP are in foreign fiat currencies, mostly US dollar and basket of other largest currencies, that are so called fiat legal tender(classical money), which does not observe any physical asset backing standard. To mitigate this conceptual paradox **Neap reserve fund** will gradually **diversify** away, as the kingdom starts to develop its economy, from fiat currencies towards a portfolio of commodities and other fungible natural resources, real estate, (preferably tokenized) securities and high grade bonds of hi-tech companies (with their vision aligned with that of KNS), intellectual property of the kingdoms science and research programs and the Kingdoms tangible assets.

Unbound inflationary debt trap

These mechanisms should substantially **lessen inflationary pressures** as the currency system is no longer an open loop system with ever growing state, commercial and societal debt and ever expanding money base (new money supply) which is misaligned with the true economic output or is often completely detached from any true value, lowering thusly buying power and trustworthiness of such currency.

The KNS economy model aims at growing **NEAP's buying power** for an average citizen over time in even more stable manner than in the most developed world economies. Basic staples and services should not expand its claim on the



citizens' income over time but rather decline, which should among other things lead to easing existential uncertainty of the citizens and increased quality of their lives. The negative deflationary effect should be diminished by maintaining increase of money velocity in the system and/or other mostly AI aided measures.

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Fiscal and monetary interventions

These tools and applications will converge into the following principles of economic regulation:

- Monetary policies such as modulating supply of NEAP in circulation by Central Bank's (The KNS Treasury) intervention on open forex/crypto markets and/or by issuing government bonds and notes priced in NEAP as well as other cryptosecurities and foreign fiat money.
- Fiscal policies such as changing rate of government spending, changing taxation, introducing changes in dynamic transaction fees for NEAP facilitated via a linked contract (not implemented yet).

A strong tool affecting consumer behavior may be operative levying of indirect taxes, if necessary, on key resources such as water and electricity and even man power.

The key difference in AI aided or fully governed economy will be the onset time frames and duration of the regulatory actions, some interventions may even go down to the scale of days for some of the objects of the levy, such as the mentioned relative NEAP price or its transactional fee.

Central Bank

Variation of full reserve banking system will be adopted. Foreign fiat and gold reserves will be held abroad for the foreseeable future, central bank Neap holdings, tokenized assets and other cryptos in cold wallets in publically undisclosed locations (but available for 3rd party independent financial audits).

As fiat is expected to stay for the time being a Swiss banking license will be acquired by KNS owned EU incorporated entity to serve as KNS Central Bank correspondence bank to the rest of the world of fiat money.

A creation of a linked smart contract is expected to facilitate adjustable transaction fee and redistribution of treasury reserves onto all non-treasury held coins as type of monetary tools allowing to affect money velocity or remedy stagflation. No coins will be destroyed or created only redistributed between the state treasury and all coin non treasury coins.

Brief Tax system outline

Tax types

- Smart Contract (acting upon NEAP layer) expedited blockchain tax system (from KNS of 5000 inhabitants- approx. year 2028)
- Single digit personal and corporate income taxation for persons and corporations, no value added taxes.
- Progressive income structure.
- Progressive indirect taxation (e.g. stamp duty on large home construction)
- Sustainability tax penalizing activities, utilities, products and goods in conflict with any sustainability principles of KNS.
- As the settlement grows immigration tax may be enacted.

Start-up strategy, KNS and NEAP

King Jeremiah is relinquishing strategic decisions in the state formation, legislation and governance, technological and scientific research conceptual directions to people who have a much broader skill set.

"I'm the visionary. I'm at the tip of the spear who will lead the charge and get beat up, but ultimately they're the ones who will decide what will wind up happening;"

The new state formation with all its founding principles is a complex multi-disciplinary process hence the statesman Jeremiah in the role of a project manager seeks to identify and solicit the best agricultural scientists, renewable energy experts, water purification specialists, social scientists, plant nutritionists, geologists, climatologists, urban planners, regional experts and other consultants, who will form NKS Advisory Committee, that will effectively become part of the nonpolitical governing body. The members will be selected based on their respective professional expertise, quality of their reason, personal wisdom. And later through democratic vote after workable foundations are laid down and the first citizens settle in.

Vision and Key goals affecting strength of NEAP

Sustainable Development Goals

KNS will follow a modified Sustainable Development Goals (SDG) (3) established by The United Nations. Since KNS starts from the blank slate; it does not have to deal much with and/or remedy missteps from the past and can commence instilling SDG's principles to a whole new set of systems and processes.

UN *The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice. The Goals interconnect and in order to leave no one behind, it is important that we achieve each Goal and target by 2030. Click on any specific Goal below to learn more about each issue.*
(3)



Figure 2 KNS will adopt customized and in most cases decidedly accelerated version of the UN sustainable Development Goals

The main divergences from the UN SDG are:

KNS vision

- More rapid speed of implementation of certain goals such as SDG Goal 1,2,4,6,7,8,9,10,12,13,17 the goals see Figure 2 for reference.
- Emphasis on rapid testing and translation of novel or rediscovering of past efficient and environmentally gentle technologies and bringing them back. In the first phases absolute focus on the goals fundamental to survival and sustainable economic growth without conflicting with the other goals

Project team formation

People

The first phases of the kingdoms inception is conceptualized as a new planet colonization project, which means every person in the KNS is a highly skilled exceptional professional handpicked for his/her role in the project. In other words these people are personal that is hired professionals. There is no requirement for them to accept KNS citizenship. Although they will all enjoy similar benefits, such as universal basic income + their respective negotiated salaries, and have similar obligations as all KNS citizens including taxation.

Key strategic goals for a sustainable KNS foundations

Path to Goals

The principal framework and attributes for the goals of KNS'programs in Scientific Research and Development, engineering, policy creation etc. are:

- Awareness of ecological and economical sustainability.
- Rapid proof of concept and feasibility ending in field testing if failing reiteration else ultimate deployment of the most promising technologies, processes and policies etc.
- Seeking out, testing, adopting and assimilating the best existing technologies, policies, socio-economical principal, etc. (let's not reinvent the wheel shan't we)

Shared attributes of the founding pillars for KNS/NEAP survival

Almost all outcomes produced in KNS, whether project or primarily utilitarian, will share the following attributes.

1. Sharing knowledge with the neighboring peoples and all interested entities.
2. Commercializing some of the technologies and know how

3. Introducing fellowship for interested engineers and scientist and technicians and specialized labor.
4. Quid pro quo economic and political cooperation with the neighboring governments and other interested or of interest entities
5. Offering semi commercial contract R&D in the above fields or close cooperation, offering facilities, land and other resources
6. Proactivity in speaking out partners and clients

The foundational R&D directions in KNS

In KNS the paramount for securing its survival and growth is leveraging sustainable technologies and professional state of the art engineering in Water, Food and Energy with the emphasis on scientific method and rapid field testing, in case of failure swift project restructuring and resetting and the consequential deployment.

Economic Outputs to NEAP

Starting with an entire nation that is a blank slate, scientists can develop a comprehensive energy conservation and management plan for every single component of the country. Fresh water, grey water, sewage, electricity production and consumption, mass transit, and petroleum usage are just a few of the energy use parameters to be measured, evaluated, and improved upon.

The advancements made in North Sudan will drive the future of energy conservation principles across the globe. It will demonstrate to the world that a nation can cut energy usage and still compete, or even outperform, less efficient, less energy-savvy. It will also give us a window into the future of what is possible with our relationship to energy conservation.

With the support of concerned global citizens, North Sudan has the ability to bypass old world technology and demonstrate the true possibilities of a 100% renewable energy based nation. Your monetary contribution opens the door to new technologies and ideas that have yet to be dreamed. Without your support, our planet will miss a great opportunity to improve our lives and those of generations beyond our own.

All the commercialized and patented know how, raised and earned cash, produced and acquired assets and products and services, in general the state economy outputs, will contribute indirectly or directly to the value of NEAP as the coin reflects fungible and non-fungible values (that add up linearly as well as in nonlinear fashion due to resource synergies) of the KNS and NEAP reserve fund. Which will be incrementally expanded based on countries balance deficit.

The Functional results of the R&D in the following 3 directions will be transferred on the peoples of Africa and elsewhere.

Water

Sources

KNS spans area of Bir Tawil, which means in Arabic Water well or Tall Water well.

The evidence for plentiful stores of fresh underground water are not only historical and is not surprising due to its close proximity to one of the biggest rivers in the world Nile and lake Nasser (only about 60km away) connected to Bir Tawil with many dried river beds occasionally filling with water. The fresh water treasure though dwells underground.

The first task will be finding a suitable spot and drilling an artesian well.

Before the well is established as an alternative source of water will serve 60km distant massive Lake Nasser spreading 200 km from Sudan to Egypt.

The water supply may be expanded with air water extraction systems (4) (5)

As a part of the KNS survival Water project alternative means of water extraction in extremely arid environments will be investigated in order to verify their deployment feasibility in communities that have no other options then capturing air humidity, exemplified by e.g. exploiting Nano-scale volume and surface geometries and chemical avenues such as in (6) (7). KNS R&D is also committed to exploration of low tech solutions such as (8).

Water filtration

Clear fresh water is a fundamental condition for life, water contamination causes

4% of death worldwide and about 29% of people lack safe drinking water. Therefore development and introduction of water cleaning technologies, tailored to local environments is a crucial global goal. (9) (10)

This need will be addressed in one of the KNS R&D programs as well. With the focus on simple cheap and location adapted locally sourced solutions, such as local ceramics (11), (12), sunlight etc.

Food

<http://kingdomsudan.org/page/food-security/>

Food resources will be secured with firm dedication to advance(ed)/(ing) agritech (13) and/or adoption of forgotten low tech but efficient techniques.

Partnership

There is an existing between KNS and Cybernated Farming Systems Inc., CFS, (14) that is a contractor with knowhow in development of advanced food production facilities dedicated to eliminating the barrier between the production and distribution of food around the world. Our facilities will be off the grid and self-sustaining, giving us the ability to place these facilities in the impoverished regions of the world where infrastructure is lacking, enabling us to feed those in desperate need immediately. Additional options include systems in apartment complexes, housing developments, resorts and more, providing a locally on demand option for people and restaurants.

Key food production and R&D goals will pivot around:

- Underground greenhouses coupled with active advanced ground to air heat pumps powered by solar or simple low tech buried tubing passive cooling system which can be built to regulate even the extreme temperatures of Bir Tawil.
- Introduction of large scale agritech systems with ultra-low water consumption for extremely hot and dry climates through license purchases and cooperation and acquisition of open technologies mostly developed in South Africa, The middle east Spain, the USA, Australia,
- (Eventually) fully automated vertical farming, ready for transfer especially to dense urban areas such as Singapore, Cairo, Lagos, Mexico city, Tokyo, New York etc.
- R&D and efficacy comparison of different variation of Hydroponic systems and their in house utilization to feeding the country. Work on completely soilless or substrate-free systems or on completely barren substrates such as desert gravel and sand.
- R&D and active gradual utilization of drones and grounded autonomous robotic and big data AI analytical and decision making systems, that will be able to grow produce from seed to harvest eventually with little or no human interventions.
- ...
- Focus on further development specifically for African Saharan and sub-Saharan environments and sharing the knowledge with the other African nations.

Energy

SOLAR

Number of studies show that switching to sustainable energy is not only more efficient and economical it will also create about 3 fold more jobs than will be lost in the fossil fuel related sectors. Energy cost will slightly decrease and the carbon dioxide emission from the energy sector will go to zero so will accompanying toxic pollution from one of the most polluting industrial sectors.

(15)

KNS is going Solar from the day one.

Bir Tawil may not have trees but it has plenty of sun light, in fact the local solar irradiation is more than 6.2 kW/m² on average. (16)

Four square meters of photovoltaic panels with 22% (17) efficiency and desert environments adaptation can generate, affixed on a simple static rig, *5kW a day* on average which can power a common laptop under heavy load for 6 days or during normal use for 12 to 18 days. This setup can satisfy power needs of an average Spanish or 24 Nigerian households. (18)

The Solar technology has come a long way and keeps getting notably better and cheaper year over year. The prices of PV are expected to further fall during 2019 by 30% (18). Power becomes a no brainer in KNS.

WIND

The solar solution can be further expanded especially during the night hours by vertical wind turbines harvesting the rising warm air being heated up by the heat accumulated by the ground during the day. For air conditioning and predominantly cooling of housing, work, industrial and agricultural facilities passive underground convection systems will be used and further boosted with earth (or aquifer water) to air heat pumps for more intense cooling applications. To amplify the air convection the night wind turbines will be strategically placed in the numerous valleys that are acting like funnels.

ENERGY STORAGE

In order to balance the energy network due to wind and sun intensity fluctuations regulated storage facilities are needed.

Primary Energy storage concepts

- e.g. Tesla Inc. power walls (massive CPU regulated battery of rechargeable Li-ion batteries) or Led crystal batteries (19)
- and pumping water up to elevated water storage tanks/towers during times of excessive power production.



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Other R&D directions after KNS gains at least partial self sufficiency

Space program

Nano satellites and their rocket carriers

3D printed building construction

Artificial intelligence in regulating Governance and economics

Automation, robotics

Medical Point of Care testing and diagnostics focused on developing nations

Drone utilization in Agriculture and security

Indoor horticulture

Plant Genetics GMO

Applied Machine learning and AI for the above fields

Support and development Of Citizen science and Maker movements

Intellectual Crowd sourcing

Sources of KNS income

ICO is not expected, although desired, to raise remotely enough cash to expand to 1000 hard at work inhabitants who should be capable to tilt the KNS balance sheet into black (the KNS economy generating money). In this section means of funding KNS growth before reaching positive economical balance are outlined.

Direct Commercialization

KNS aims at potential commercialization of its Science and Engineering achievements whether building around Open source technologies released by KNS team to the wide public in the spirit of companies like [<https://thinkoggun.com/>, Prusa, <http://farmhack.org/shops>, Arduino, Adafruit Industries, Openoffice, Suse, Docker, Github ,etc] or semi or fully closed technologies to support KNS quest for advancements .in sustainability and its own national development.

Grants and subsidies

Great part of commercial efforts will be invested in international collaboration and participation in grants and subsidies funded project (offered by a) super national entities such as EU (especially active), UN, IMF b) nation c) private nonprofit and commercial entities etc.)

Commissioned projects and contractual work

Other Goods and services

Natural resources

There are solid indication based on geological surveys of the region for presence of gold, gems, rare metals.

KNS has as of Jan 1st 2019 four parcels standing offering via no bid lease contracts to be issued on a first-come, first-serve basis. The 4 parcels (totaling 297,900 acres), include Crown land in the western and central Bir Tawil mineral basin.

- Prospecting and mining licenses
- or outsourcing mining operators

Offering land, physical and intellectual resources and facilities

- Renting out KNS' facilities and selected plots to interested parties ranging from state, commercial or academic spheres, to citizen science and nonprofit entities.
- Special class of services are intended for aerospace and larger agricultural projects

Crowdfunding projects or tokenized equity offering

Education and training

Utilizing Intellectual Crowdsourcing and crowdcomputing

Donations and perks



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Key technologies in KNS

KNS will emphasize and build upon the following technologies (among others)

- In construction emphasis on 3D printed housing, technology already mature enough, with many finished buildings all over the world. 50% or greater construction cost reduction, many folds faster finishing of base structure
- 3D printing in spare parts, tools and machines, utilization of metal and ceramic printers etc.
- 3D printing simple microelectronic systems, prototyping
- Robotics in agri and horticulture, food production, logistics; human exo-augmentation for heavy labor, exploration, security
- Advanced Subtractive machining CNC, lasers- together with 3D printing has become very affordable yet more advanced, allowing unprecedented freedom, speed, cost reduction in developing novel solution or just maintaining existing even in remote areas of the world or space.
- IoT, maximizing control and regulation of systems in general from home environment, greenhouses to congestion in logistics , production, goods or people movements, resource allocation, malfunction monitoring and prediction of a systemic failure, patients or animal monitoring, data collection for post hoc or online model creation and augmentation, this coupling with AI brings unprecedented system optimization performance.
- Despite large open spaces KNS offers.
- Horticulture will focus on greenhouse
- Cooperation and promotion of projects like opensourceecology.org/

TIMELINE



2023
2025
2027
2030
2050
2100

- fully locally sourced water, energy means met for 150-400 people all year around
- at least 35% of food produced locally, the rest sourced primarily from Africa, 70% from all imports are from sustainable organic operations
- Simple structure blockchain governance platform in Beta ver.
- Blockchain Invoicing system layered with NEAP blockchain for all subjects whether private, commercial, government, applicable to payments outside KNS as well
 - Elemental smart contract system for taxation
 - Logistics and inventory blockchain system for all production and cross border movement of goods and services-adoption or extension of existing such system
- All KNS projects running on Blockchain management system – Open source

sustainable infrastructure for survival of 300-500 people all year around

- foreign reserves and NEAP reserve fund only less than 50% backed by other fiat (mostly securities, commodities and crypto, real estate)

adoption of a newer blockchain type technology for NEAP (1 old for 1 new exchange program)

- 1000 to1800 inhabitants including visiting hired force;
- positive balance sheet, foreign reserves and NEAP reserve fund only less than 80% backed by other fiat (mostly securities, commodities and crypto, real estate, IP)
- facilitating own security from at least 40%
 - own law enforcement
 - judicial system, 70% AI aided

25000-50000 inhabitants

High import tax levied on products and raw materials from unsustainable sources

High diversity of self-sustainable local production

60% of law matters AI fully executed with Human committee of ombudsmen

- 500000-1500000 citizens
- 85% self-sufficient and sustainable in every aspect on modern life

- Direct participation in space colonization and space resource acquisition pa



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Bibliography

1. federalreserve. *federalreserve*. [Online] 2014. <https://www.federalreserve.gov/foia/2014currency.htm>].
2. *Supervised learning with quantum-enhanced feature spaces*. **Havlíček, Vojtěch, et al., et al.** 7747, s.l. : NLM (Medline), 3 14, 2019, Nature, Vol. 567, pp. 209-212. 10.1038/s41586-019-0980-2.
3. About the Sustainable Development Goals. *The UN*. [Online] <https://www.unenvironment.org/explore-topics/sustainable-development-goals/about-sustainable-development-goals>.
4. skywater. *islandsky.com*. [Online] 2019. <https://islandsky.com/faq/>.
5. JMCC WING. *marketwatch*. [Online] 2018. <https://www.marketwatch.com/press-release/jmcc-wing-llc---one-of-five-finalists-in-water-abundance-xprize-powered-by-tata-group-and-australian-aid-2018-03-22>.
6. *Practical water production from desert air*. **Fathieh, Farhad, et al., et al.** 2018, Science Advances. 10.1126/sciadv.aat3198.
7. nanofibers for fog nets. *uakron*. [Online] 2018. <https://www.uakron.edu/im/news/engineering-professor-to-present-freshwater-research-at-ac-s-national-meeting/>.
8. warkawater. *warkawater.org*. [Online] 2017. <https://www.warkawater.org/warka-tower/>.
9. Drinking water. *WHO*. [Online] 2018. <https://www.who.int/news-room/fact-sheets/detail/drinking-water>.
10. Unsafe drinking-water, sanitation and waste management. *WHO*. [Online] 2018. <https://www.who.int/sustainable-development/cities/health-risks/water-sanitation/en/>.
11. puremadi ceramic water filtration system. *puremadi.org*. [Online] 2019. <http://www.puremadi.org/science-overview>.
12. *Slow sand filtration*. **Ellis, K. V.** 1985, Critical Reviews in Environmental Control. 10.1080/10643388509381736.
13. agritech. *wikipedia*. [Online] 2019. <https://en.wikipedia.org/wiki/Agritech>.
14. cyberfarmsystems. *cybernated farm systems*. [Online] 2017. <https://www.cyberfarmsystems.com/>.
15. Global Energy System based on 100% Renewable Energy. *energywatchgroup.org/*. [Online] 2019. <http://energywatchgroup.org/new-study-global-energy-system-based-100-renewable-energy>.

16. Global solar atlas. *globalsolaratlas.info*. [Online] 2019. <https://globalsolaratlas.info/>.
17. What are the most efficient solar panels on the market? Solar panel efficiency explained. *energysage*. [Online] <https://news.energysage.com/what-are-the-most-efficient-solar-panels-on-the-market/>.
18. MIP impact: EU module prices to decline by 30%, 2019 PV demand up 40%. *pv magazine*. [Online] MIP impact: EU module prices to decline by 30%, 2019 PV demand up 40%.
19. hybrid energy solutions. *betterworldsolutions.eu*. [Online] 2019. <https://www.betterworldsolutions.eu/dutch-hybrid-alternative-for-the-tesla-powerwall/>.
20. KNS history. [Online] <https://www.kingdomsudan.org/page/history/>.
21. Send money directly to the extreme poor. *givedirectly.org*. [Online] <https://www.givedirectly.org/operating-model>.
22. The Effects of a Universal Basic Income in Kenya. *povertyactionlab.org*. [Online] 2018. <https://www.povertyactionlab.org/evaluation/effects-universal-basic-income-kenya>.
23. **Banerjee, Abhijit, Niehaus, Paul and Suri, Tavneet.** *Universal Basic Income in the Developing World*. National Bureau of Economic Research. Cambridge, MA : s.n., 2019. 10.3386/w25598.
24. *Basic income – healthy outcome? Effects on health of an Indian basic income pilot project: a cluster randomised trial.* **Beck, Simon, Pulkki-Brännström, Anni Maria and San Sebastián, Miguel.** 1, s.l. : Routledge, 1 2, 2015, Journal of Development Effectiveness, Vol. 7, pp. 111-126. 10.1080/19439342.2014.974200.
25. *Household Response to Income Changes: Evidence from an Unconditional Cash Transfer Program in Kenya.* **Haushofer, Johannes and Shapiro, Jeremy.** 2013, Working Paper.
26. Foldit. *fold.it*. [Online] 2011. <https://fold.it/portal/info/about>.
27. seti@home. *setiathome*. [Online] <https://setiathome.berkeley.edu/>.
28. RNA folding. *eternagame*. [Online] <https://eternagame.org/hom>.
29. Gamifying Quantum Theory. *thequantumtimes.org*. [Online] 2017. <http://thequantumtimes.org/2017/03/gamifying-quantum-theory/>.
30. erc 20. *wiki*. [Online] 2019. <https://en.wikipedia.org/wiki/ERC-20>.
31. ethereum. *ethereum.org*. [Online] <https://www.ethereum.org/>.
32. ethereum. *wiki*. [Online] 2019. <https://en.wikipedia.org/wiki/Ethereum>.



33. Proof-of-stake. *wiki*. [Online] 2019. <https://en.wikipedia.org/wiki/Proof-of-stake>.

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