## **Outline of a Climate/Development Infrastructure Investment Metabolism**

How can we make a highly attractive Global Infrastructure Investment Metabolism?

• With the organelles of a biochemical model of finance:

UEC-----A hybrid Bond-Coin UAS-----A Web Architecture

UAS Interface------A Transparent Working Model

COV A→B------A Concatenation of Investment Vehicles

TRELLIS Agreements----- Sequence of (minimum) Unanimous Conditions

• The UEC-----A hybrid Bond-Coin

Like a Bond it cannot claim the assets of the issuer.

Like a Coin it is unfalsifiable/unique/you cannot fake one.

Each coin of the Universal Engineered Currency is tethered to a specific asset in a specific geographic location, like a solar panel or length of water pipe, so you cannot fake it.

UAS-----A Web Architecture

The Universal Audit Space is a web space representation of Earth, where you can zoom in to check the asset to which your coin is tethered.

UAS Interface------A Transparent Working Model

The Universal Audit Space Interface represents the operation of the metabolism of infrastructure investment so that the function of the parts can be understood as a whole. Most crucially, it represents the task of Global Infrastructure targets as spherical layers or strata of development. The four strata are:

Stratum 4) the consumables and experiences to be had in prosperous economies and ecologies—and where they intersect—in cities.

Stratum 3) the economies and ecologies that prosper upon systems.

Stratum 2) the systems of distribution like smart grids and water grids; transport.

Stratum I) the infrastructures, like solar fields and water desalination and intake structures, main sewage arteries.

COV A→B-------A Concatenation of Investment Vehicles

These are the 4 Vehicles that produce the assets of each stratum. The Concatenation of Vehicles A→B organizes the creation of the structures of full carbon negative development "B" into 4 strata, much like a 3-D printer. Each stratum of development has a Stratum Vehicle and a Stratum Bank.

TRELLIS Agreements-----A Sequence of (minimum) Unanimous Conditions

These are the agreements laying out the rules and goals for the development of the strata and establishing that Stratum's Bank. Their unanimity is founded on the fact that they are accomplishing prerequisites to the productive existence of any human body, which is 99.999% alike.

Working together these constitute an ascendant machine to allow the pool of investment to build and climb-up the physical strata of development out of infrastructure space—to a large and painless return amidst the prosperity it helps create.

### • Metabolic Operation

The mode of transferring the investment between the strata elaborates the logic of reinvesting in the success of an accomplished asset. It provides for a contractual right to this reinvestment opportunity. Accomplishing the solar field gives its investors the right to invest in the smart grid. Accomplishing the smart grid gives its investors the right to invest in the cars, cities and universities. These are steps that can be mounted from the starting point of any global infrastructural prerequisite. These are the 4 strata of the COV A→B and their Stratum Banks.

The mode of liquidating the asset accomplished by a vehicle of the COV—so that the money can be put reinvested in the next stratum—makes use of the audit power of the UAS, which examines the accomplished assets and assigns them unfalsifiable symbolic value tethered to the exact specifics of its material instance. The high precision and constant updating of the audit is very valuable because it is universal and transparent. The audit is gathered in a transparent and open access web architecture where you can go online survey the asset in its geolocation. From the unfalsifiable reality of the asset an unbreakable filament is drawn into the production of a coin forever tethered to the specifics of the asset (or its negotiated transfer to an equal other).

This unfalsifiable symbolic value is sold to the Audit power that issues a correspondent coin for sale to the market. The coin comes in one size, but it has a durability denomination representing the projected lifespan of the audited asset—providing an enormous selective pressure for quality. The COV must present its accomplished assets to the audit before it can sell the symbolic value. The UAS issues UEC coins, a coin that appreciates in value as each stratum is built on the asset to which it is tethered. The asset to which a coin is tethered are insured by the Stratum Bank's insurance, reinsured by the insurance pool of sovereign nations, which are backed by the assets of the hydrocarbon energy infrastructure it is replacing. A UEC coin is a currency of the highest quality symbolic value, issued by the metabolism that creates, audits, insures and issues it. Its sale to the market with the accomplishment of an asset provides a revenue stream to pay investors and big maturity return for reinvestment in the next stratum of the COV.

UEC Coins are an ideal foundation for further financial engineering or a safe and appreciating wealth store. The coins can be rented to further engineering for a term of their durability and risking only the appreciation, not the coin. The coin has a tether to the hyper specificities of the asset whose symbolic value it holds, but it has no lever on the assets themselves.

The COV  $A \rightarrow B$  is a high-yield high-security long-term investment with 4 emergency exit windows and granular revenue stream. Investment in the COV  $A \rightarrow B$  allows you to join a global pool of investment capital that builds, liquidates and reinvests to carry your money up an ascendant trajectory of value creation, building and growing over the 4 strata of development to a final massive payout in conditions of prosperity.

After the assets are accomplished and their symbolic value is liquidated, the assets themselves (and their maintenance contracts) can be nationalized and there is no need to produce any revenue from use of the infrastructure, maximizing the developmental multiplier effects of use and the welcome it receives from the hosts of its individual projects.

#### **APPENDICES**

# **Appendix I** possible INTRO:

How can a great pool of western pension funds and government money benefit from economies and securities of scale and make their secure return while accomplishing the infrastructure to stave off global calamity and realize global prosperity?

The economic benefits of doing it right are clearly laid out in reports from NASA, Lord Stern, World Bank, UN, etc.: to avoid a 25% loss of economic activity by the end of the century. We will save allot of money if we quickly raise humanity—and Life itself—up onto the prerequisites of dynamic carbon-negative global prosperity.

The last time engineers attempted such a scheme—richer people investing in poorer people's housing mortgages on a grand scale in the west—we provoked a financial crisis. The engineering in abstract territories had no leverage in actual granular material reality until the substrate of house prices fell away and the leverage expulsed millions from their homes. These vehicles were crudely engineered aggregation power forays to scalar economies that tranched and squandered the symbolic value of the assets, and then helped to destroy them. We need a much better engineered investment apparatus if we are to conquer Infrastructure Space with aggregation power.

# **Appendix 2:**

Executive Summary Description: This proposal for a Global Infrastructure Investment Metabolism includes strong controls over its effect on- and provision to- the global economy and national sovereignty as they now stand. It proposes a negotiated agreement with the interests and assets of the hydrocarbon energy infrastructure (peace in Infrastructure Space). It is a technical script to include in a win-win strategy to increase the quantity and quality of valency between money and matter in infrastructure space, whilst providing a strong coin for the engineering of further value. It adds numerous productive conjunctions, efficiencies, mechanistic synchronizations, but most urgently it concentrates specific values in specific opportunities to give them stronger and more transparent qualities; it cleans up the financial chemistry to give us more power and agency to produce high quality real and abstract form.

At heart this proposal elaborates the model of 'government bond'—putting ones money into a big pot with a secure trajectory of appreciation—into a far more sophisticated, transparent and attractive coin and pot than can be offered by a government bond, whilst retaining many of the strengths of a good government bond.

- -It elaborates a new mechanism for origination and appreciation of the coin. Better than gold and better than bitcoin and better than 2% target.
- -It elaborates the power and precision of the material asset audit to include the power to issue the coin and as a multipurpose negotiator between the realms of abstract/engineered value, real material assets and projects/plans. That is to say the coin and the audit power that can issue it are the formal interface between money, matter, and what we want to build in Infrastructure Space.
- -Most remarkably, it involves neither the permanent ownership nor use-revenue of the infrastructure asset it produces. Whilst creating the conditions for the capture and monetization of three old values we squander without measure.

### Appendix 3: Historical problem of Infrastructure Investment

Summary of the current problem with infrastructure investment in Emerging Economies: For all but the wealthiest cities, use-revenue dependent models of infrastructure investment defeat their own infrastructural value: By charging for use we defeat the heavy usage that provokes prosperity. By requiring revenue from fragile currencies/economies we undermine the very security that makes an infrastructure investment attractive.

Summary of the historical problem with Infrastructure Investment: how to take your return outside of Infrastructure Space amidst the wealth it supports: At the birth of modern economics, the Physiocrats saw that removing agriculture from the political economy of the day would be deleterious to the young cities mushrooming at the borders of their agricultural estates—and they wanted to be paid for that fact. They wanted to harvest a return for their investment at its new real maturity: amidst the value being created in the cities. The dynamism of cities and nations quickly obliterated the Physiocrats' tidy diorama of dependency, because the success of infrastructure obscures its role: One rarely thinks of London's sewers when admiring its property values. The pleasures of Facebook rarely bring ones attention to deep-sea cables and disk arrays. Successful infrastructure is overgrown and hidden like a trellis by the prosperous rose climbing its handholds. And yet, the natural profit point of the Victorian investment in quality sewer pipes is amidst the super-mature conditions of a booming London 2015—able to pay for a super-sewer. Even this is cold comfort to a Victorian investor in the waterworks company with no chance of holding onto their claim. And frigid to the rest of the world, which is not in conditions of blooming epitaxial maturity where water bills are dwarfed by property values.

# Appendix 4: UAS diagram:

