The world needs a true decentralized internet

http://decentralization.threefold.me

Introduction

Is Liberalism dead? Is there an alternative? The world has never been more global and prosperous, but so many people are unhappy. Our too capitalistic (rational mind driven) system is destroying our planet's resources and most people ignore this sad reality and go on with their lives like everything will stay the same as has been for the last 60 years.

The world needs some healing. There is too much talk in our world and not enough action. We believe that we are not powerless. We shouldn't blame others: governments, society, politicians or other countries. We all are at the source of the problems the world is facing today, together we can do something about it.

We need a new approach, an approach which starts with ourselves and we need to realize that we can't solve problems by using the same kind of thinking we used when we created them (Einstein).

We believe we need a new truly decentralized internet, an internet not owned by some large corporations but an internet where you become the center of your own circles. This internet needs to be owned by all of us together. The goal is to make everyone the center of their own universe (we call them circles). Not as a part of a big machine or, more recently, a blockchain.

We at ThreeFold are working to create such a decentralized internet. In this document you can read more about why do we need such a solution and the introduction of our 3bot (which is your digital avatar) as the main instrument of this decentralization.

You can also read our whitepaper (http://whitepaper.threefold.me) about the ThreeFold Grid.

The document you're reading now is focussed on the functions of the 3bot (you're digital avatar) and how we need to become the owner of our own data and the center of our digital life on this improved internet.

We are not a rebellious group. We are a growing group of people who don't want to wait for things to change because together, we believe we can help the world to heal. We are a passionate group of people who act. We want to work with any government, financial institution, university or any organization to make this change as long as we agree on the same set of values. You can read more about our values in our "FreeFlow Nation" manifesto.

Decentralization is a new revolution.

The world right now has known a long period of relative peace (+60 years). [Liberalism](#) was the engine behind this prosperous period. Some claim that [liberalism as we know it, could come to an end](#). Liberalism is a political and moral philosophy based on liberty and equal rights (see [wikipedia](#)).

Personally we believe there is no better alternative to Liberalism. The values behind Liberalism are great but unfortunately the implementation has been very poor. The main reason for this poor result was centralization and too much focus on ultra efficient capitalism.

We believe decentralization could be the tool Liberalism needs to survive. This could be the next required step in human evolution. This revolution started with Blockchain, very interesting technology, and the first step but not going far enough yet.
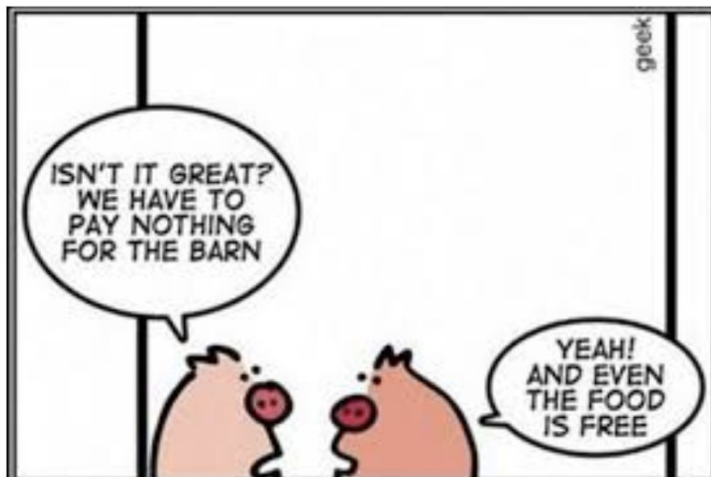
Thanks to the blockchain hype, a new business trend has been created, and the current solutions are only the beginning. It's a trend where customers want to see more decentralization. People want to have more control over their own lives. They don't want to become a meaningful piece inside a big Artificial Intelligence machine.

The problem: we became a product.
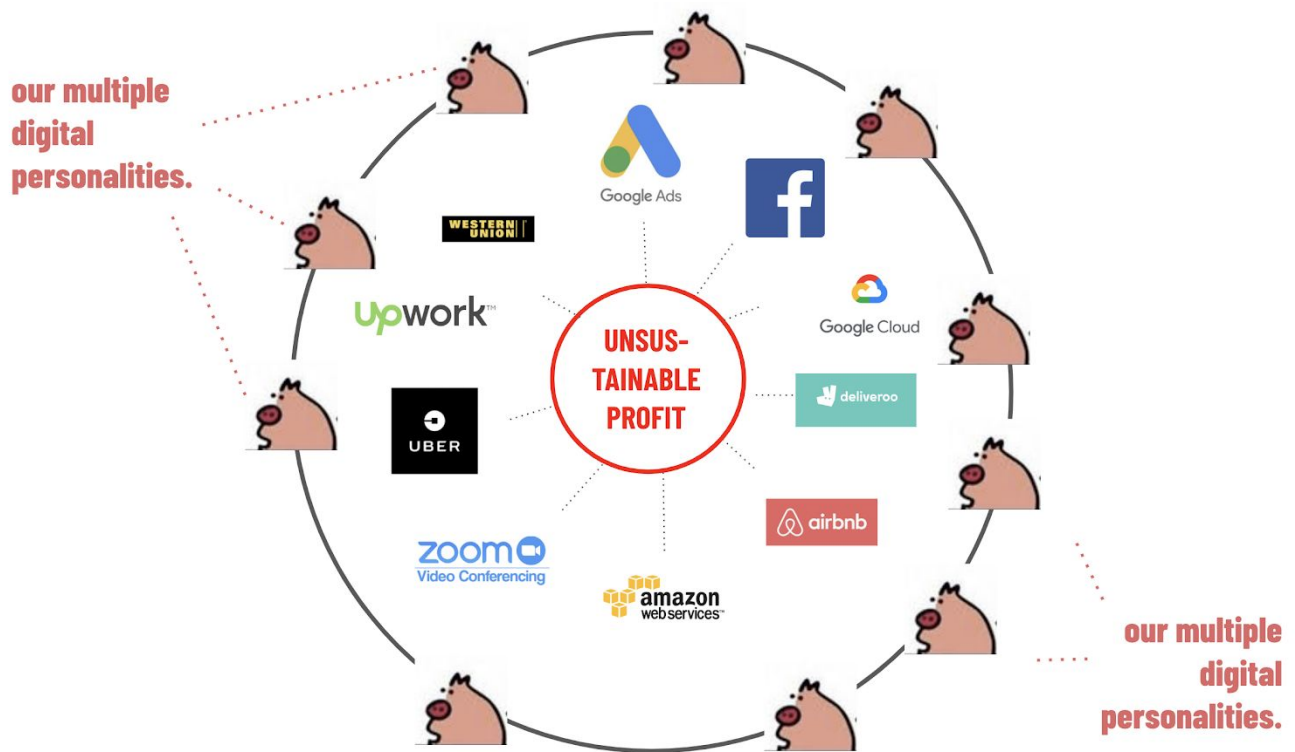
DATA = IS THE NEW OIL …

Our data is the most important asset we have. Companies like Facebook and Google needs lots of our data to function.

In our world, profit is the main driving force of our society, reducing us to a product in a big services machine. We no longer exist as an independent person, we exist as targets in a big Artificially Driven machine programed to maximize profit. Our data is the most valuable asset in this world.

Next to the unethical behaviour of above paradigm there are also huge side effects in the way how these systems have been built.

Most of us exist more than 50 times in such a system. Each time you register for a new service you actually create a new digital identity. You only have partial control over these identities and it leads to very inefficient behaviour.

Some examples:

- Because you exist +50 times, the compute & storage power required to deal with these services are duplicated 50 times. This means 50 times more world resources are used than really required.
- Your data resides on many locations and is not really managed by you.
- You're services are very centralized and as such you have to digitally travel far to reach those services, leading in less performance, more cables, less healthy technologies (5G)
- The datacenters hosting these applications are huge and very power hungry, while in reality they are not needed.

The idea: we need an improved internet system where we are the center.

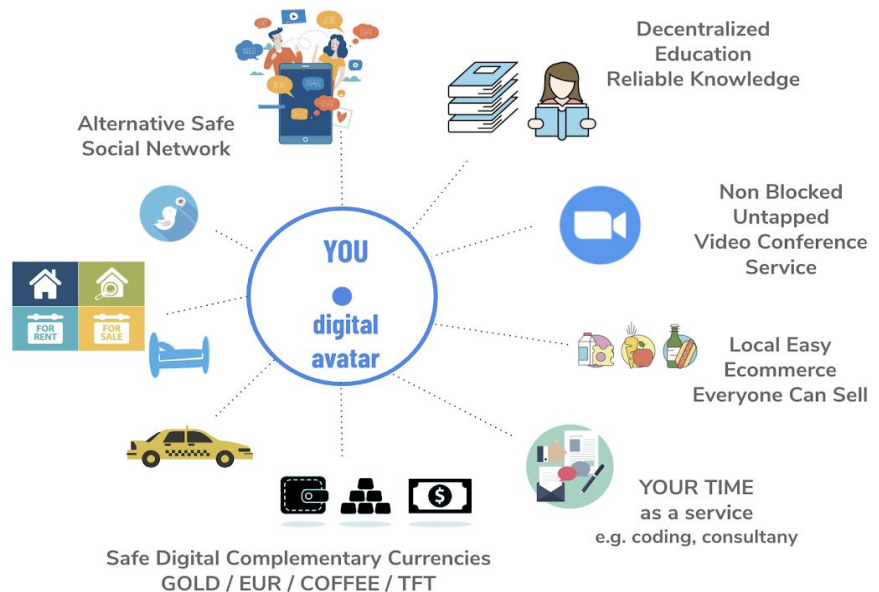## IT'S ALL ABOUT YOU

You only exist one time.

Super Efficient.
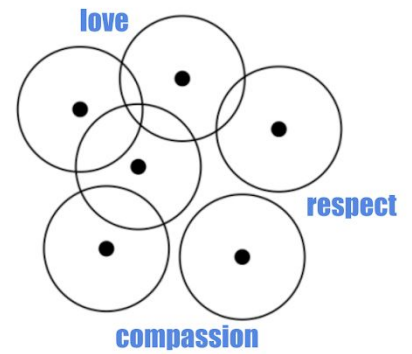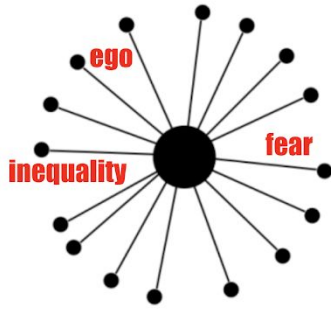
No duplication of data
or Communication

You pay for what you use.

Everyone is in business now.

Alternative Safe
Social Network

Decentralized
Education
Reliable Knowledge

Non Blocked
Untapped
Video Conference
Service

YOU
•
digital
avatar

FOR RENT   FOR SALE

Local Easy
Ecommerce
Everyone Can Sell

YOUR TIME
as a service
e.g. coding, consultany

Safe Digital Complementary Currencies
GOLD / EUR / COFFEE / TFT
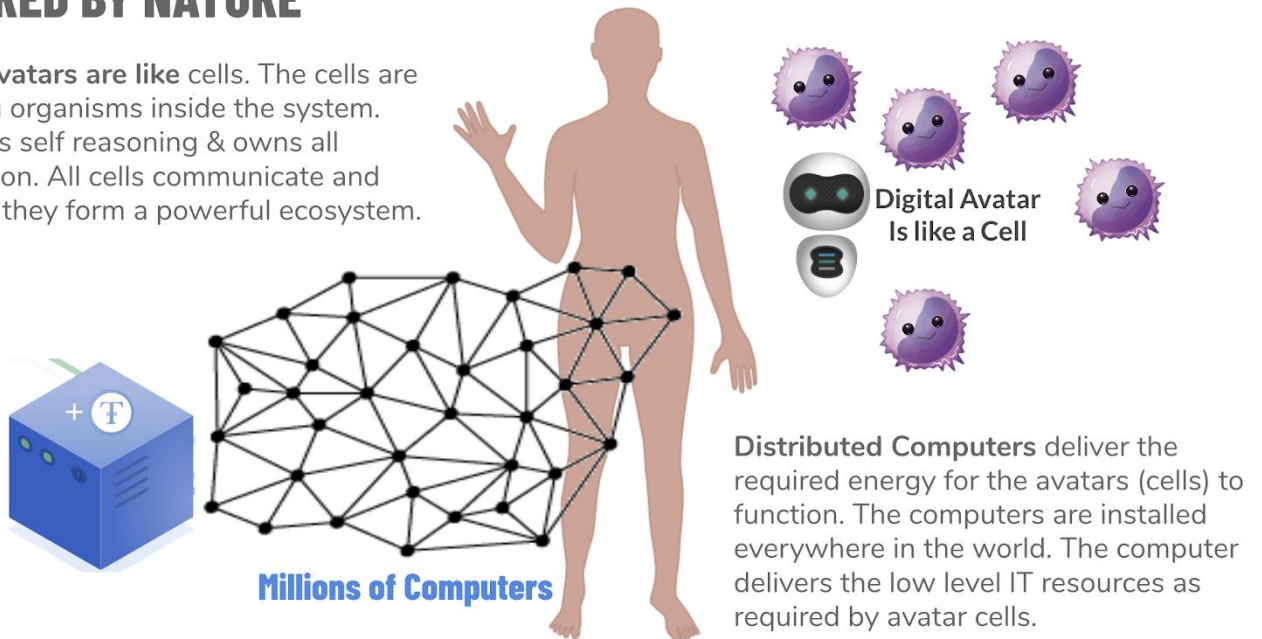
You're the only one in control.

For the last couple of years blockchain was the synonym for decentralization. We believe this is not True, most blockchains are not decentralized at all. They are distributed systems but not decentralized.
Real de**central**ization is still centralized but in a different way. In our way of decentralization we believe that you need to become the center of your digital life and no-one but you can define how your data is being used.

We believe every legal or human entity should have a digital avatar. This avatar is an application running in a neutral and free internet and is online all the time and can speak to any other digital avatar in all freedom and with all efficiency. More like how cells work in our body, all together we create a functioning digital world, by collaboration rather than suppression & control.
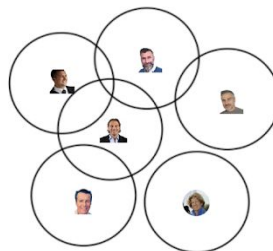
INSPIRED BY NATURE

Digital avatars are like cells. The cells are the living organisms inside the system. The cell is self reasoning & owns all information. All cells communicate and together they form a powerful ecosystem.
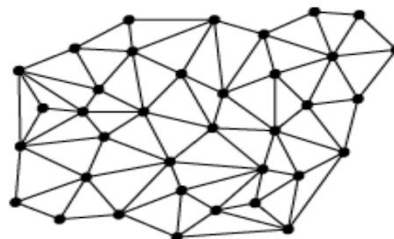

Digital Avatar Is like a Cell

Millions of Computers

Distributed Computers deliver the required energy for the avatars (cells) to function. The computers are installed everywhere in the world. The computer delivers the low level IT resources as required by avatar cells.

Living Grid Of Intelligent Digital Avatars

- Are the living cells
- Intelligent & Independent
- Self Healing
- Owns the data = DNA/RNA
- Communicates
- Own remuneration system $$$

Digital Avatar

Decentralized Internet Capacity

- Distributed Grid
- IT Capacity
  - Storage
  - Compute
  - Networking
- Source Of Energy
- No Intelligence / Reasoning
  Is the energy for the Digital Avatars.

A Neutral & Free Decentralized Internet

Millions of Computers
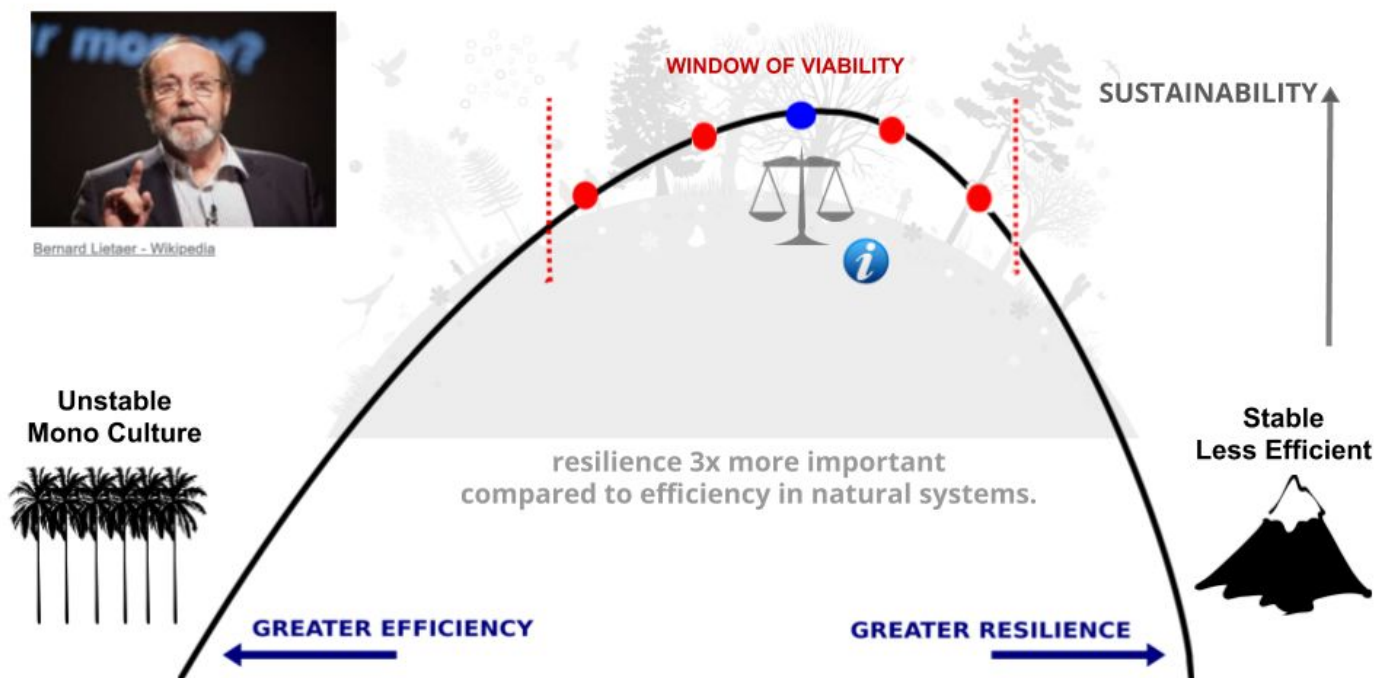
The path to sustainable real decentralization

Efficiency vs Resilience

Professor and currency expert Bernard Lietaer (http://www.lietaer.com/) advocated an upgrade of our money systems as a systemic solution to our global economic, financial, and sustainability crisis.
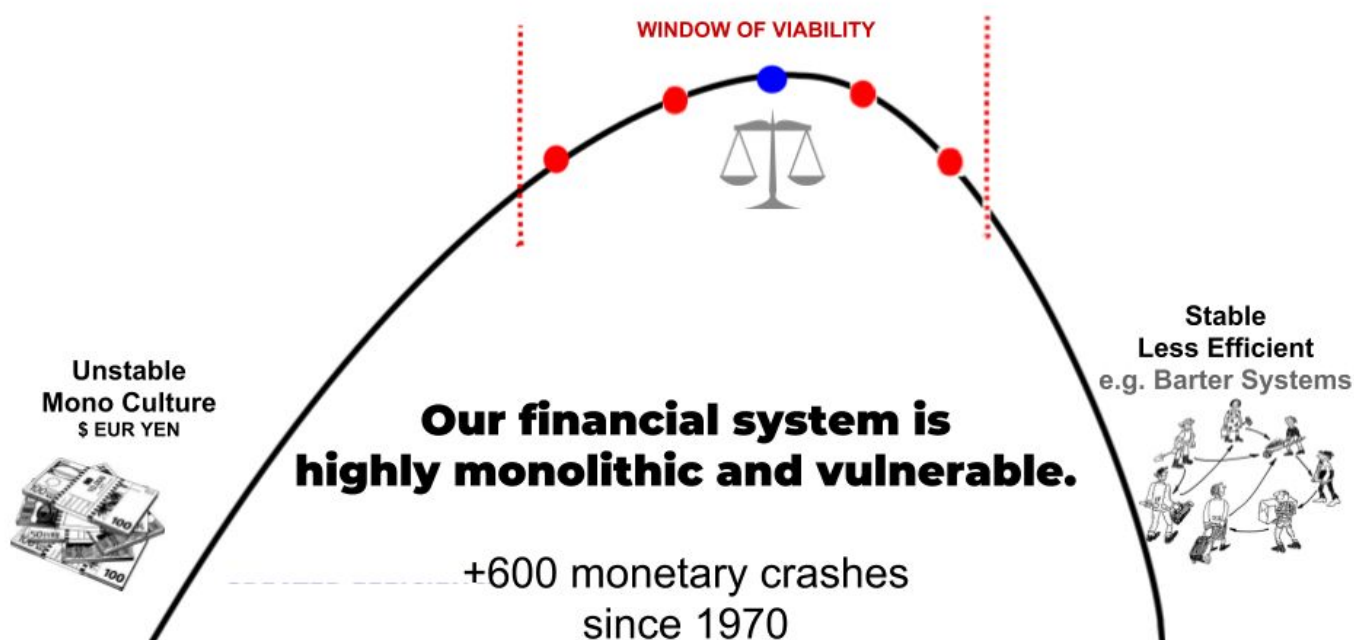
One of the ideas he advocated is how every system in the world balances between efficiency and resilience. In nature, resilience is several times more important than efficiency.

Understanding parts of his work help to explain how the world became what it is today. It's the result of a period where efficiency was everything. It gave us the fastest evolution ever achieved in only 100 years but it's not sustainable. His findings can be applied to anything: nature, money, technology, society, ...
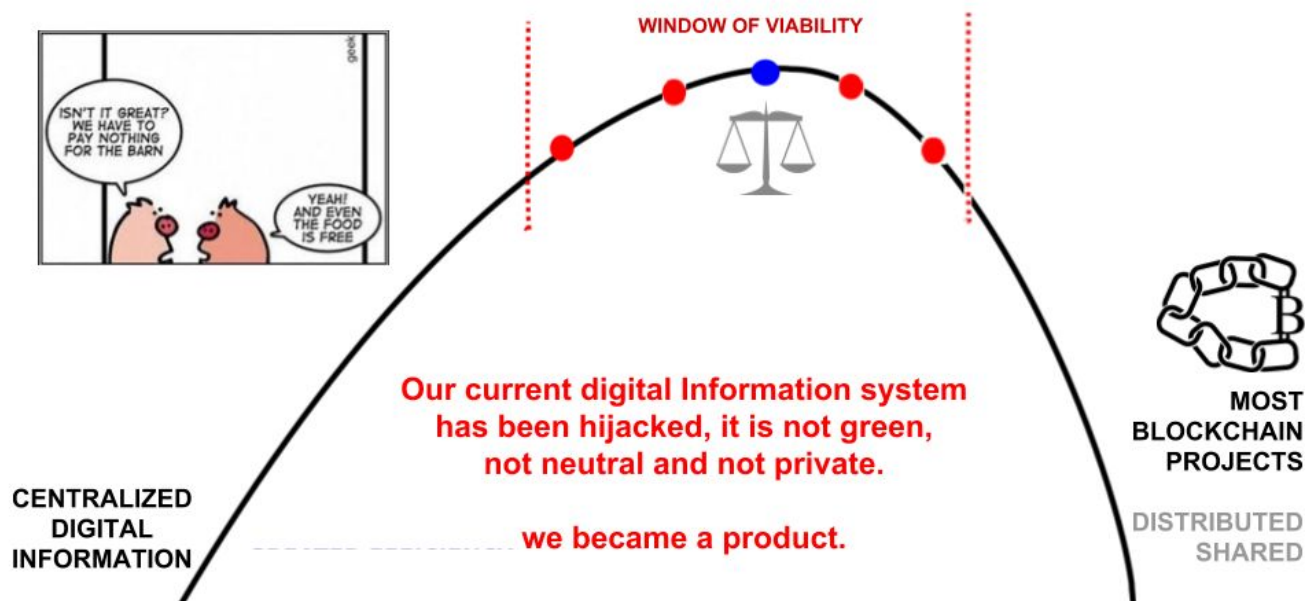
A super efficient system like a monoculture such as pine wood will be not very resilient. These types of forests are very susceptible to sickness and fire, while on the other hand, a mixed forest of trees is much more resilient but not so efficient.
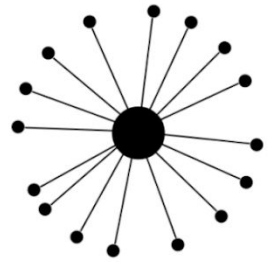

Our money system is a monoculture, it's very efficient (money being created out of nothing) but also very vulnerable. There were more than 600 monetary crashes since 1970. Most cryptocurrencies today are also monocultures and therefore unstable by design.
Any system that wants to survive for a long time will have to be in the "window of viability".

Current internet systems are efficient (controlled) centralized systems, they can be hacked easily (are hacked) and are not private. They are positioned left on this curve.
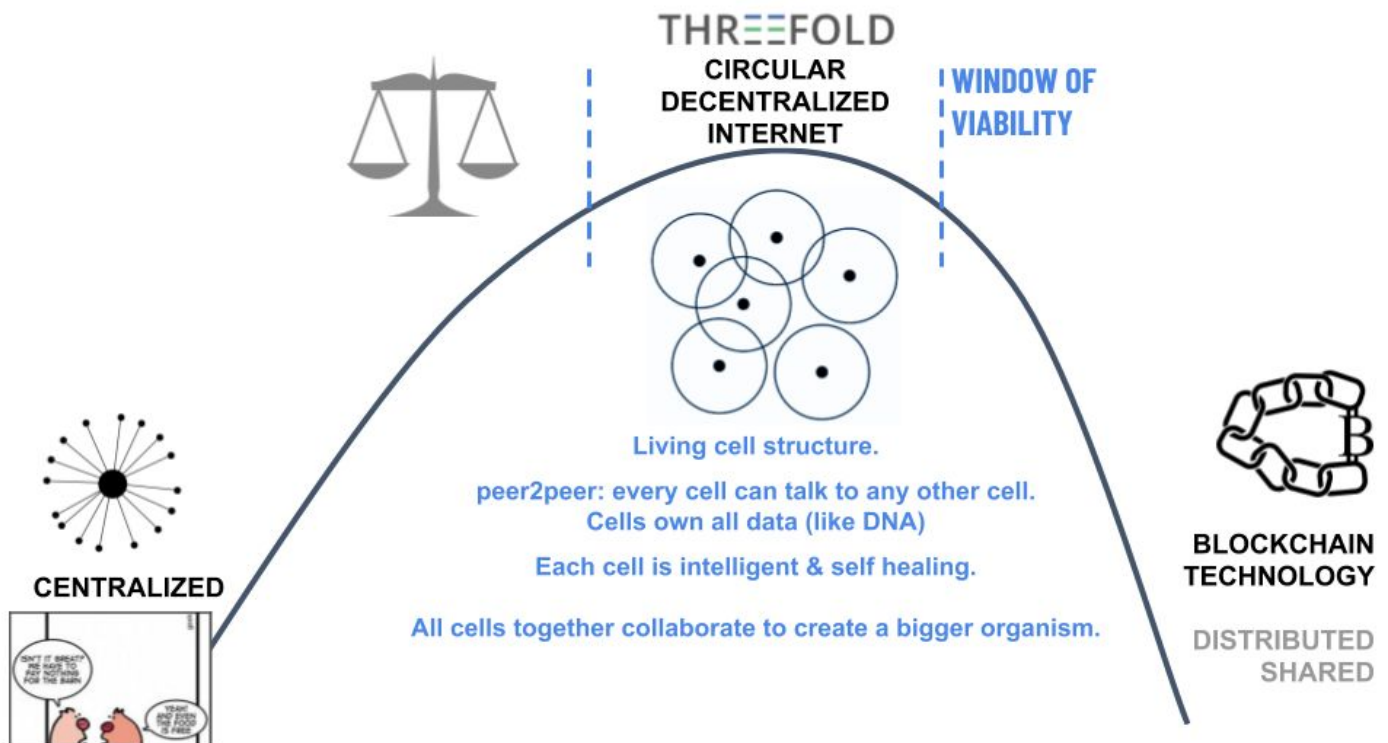
Non Scalable, Power Hungry & 100% Centralised

Data centers are built only in energy dense areas because they **consume huge amounts of energy.**

BAD FOR THE PLANET

Blockchain technology is often positioned as the swiss army knife which can save us all and deliver full decentralization. While we believe blockchain technology has lots of potential and is a very important invention for certain workloads, it's not very efficient to be used as an information technology system. It is very reliable though and sits at the right side of this curve.

The ThreeFold decentralized internet system is sustainable.

Everything is a balance between efficiency and resilience (see above). In our current society, the focus is too much on efficiency which has lead to too centralized systems. Centralized systems are too fragile (boom-bust cycles) and can lead to abuse as well (we became a product in centralized data management systems e.g. Facebook, ...).
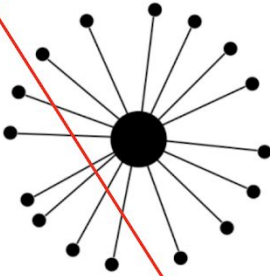

The current centralized systems or the current Current Blockchain systems are at the outer sides of this curve.

A new system is needed with the right balance between centralization and distribution this is the true form of decentralization. We believe the right form is like a circle where we (or any legal entity) are the "center" of the de-**central**ized world. Blockchain technology is used inside your center of the circle (which we call a digital avatar) as well as finding consensus in between the circles (digital avatar). The combination of both concepts makes a sustainable, viable solution possible.

This solution would sit in the sustainable part of Bernard Lietaer efficiency vs resilience graph.

CENTRALIZED
AS WE KNOW "IT"

CIRCULAR
THREEFOLD

DISTRIBUTED/SHARED
BLOCKCHAIN PROMISE

Centralised Data:

- Star/Pyramid systems¯
- People driven.
- Centralized Data
- Often Power Hungry
- Can Be Slow & Unscalable
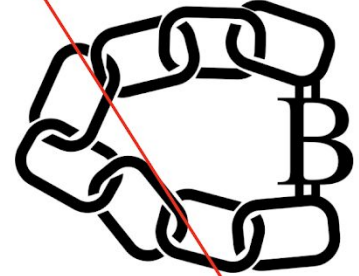- Expensive
- Most Efficient

Living Grid Of Intelligent Cells

- Distributed (peer2peer)
- Real Decentralization
- 100% guaranteed private
- Green (10x power savings)
- Unlimited Scalable / Fast
- Affordable for everyone
- Efficient
- Self Healing

Shared Data:

- Distributed
- Most Still Centralized
- Shared Data
- Power Hungry
- Slow & Unscalable
- Hidden costs
- Inefficient

You can read more about the ThreeFold decentralized internet system = the ThreeFold Grid in the ThreeFold Grid whitepaper: http://whitepaper.threefold.me

Is Blockchain the holy grail for decentralization?

Blockchain has been painted as the holy grail of decentralization and new types of collaboration, but it has quite some issues:

- Non Efficient by design
    - Power hungry
    - Slow and Unscalable..
    - inefficient in the usage of IT resources (too many copies of data, …).
- Not decentralized (taxonomy report, decentralization vs distributed, hackernoon, blockgeeks)
- Private blockchains do not exist (hackernoon, coindesk)
- Greed has been too much of a driving factor.
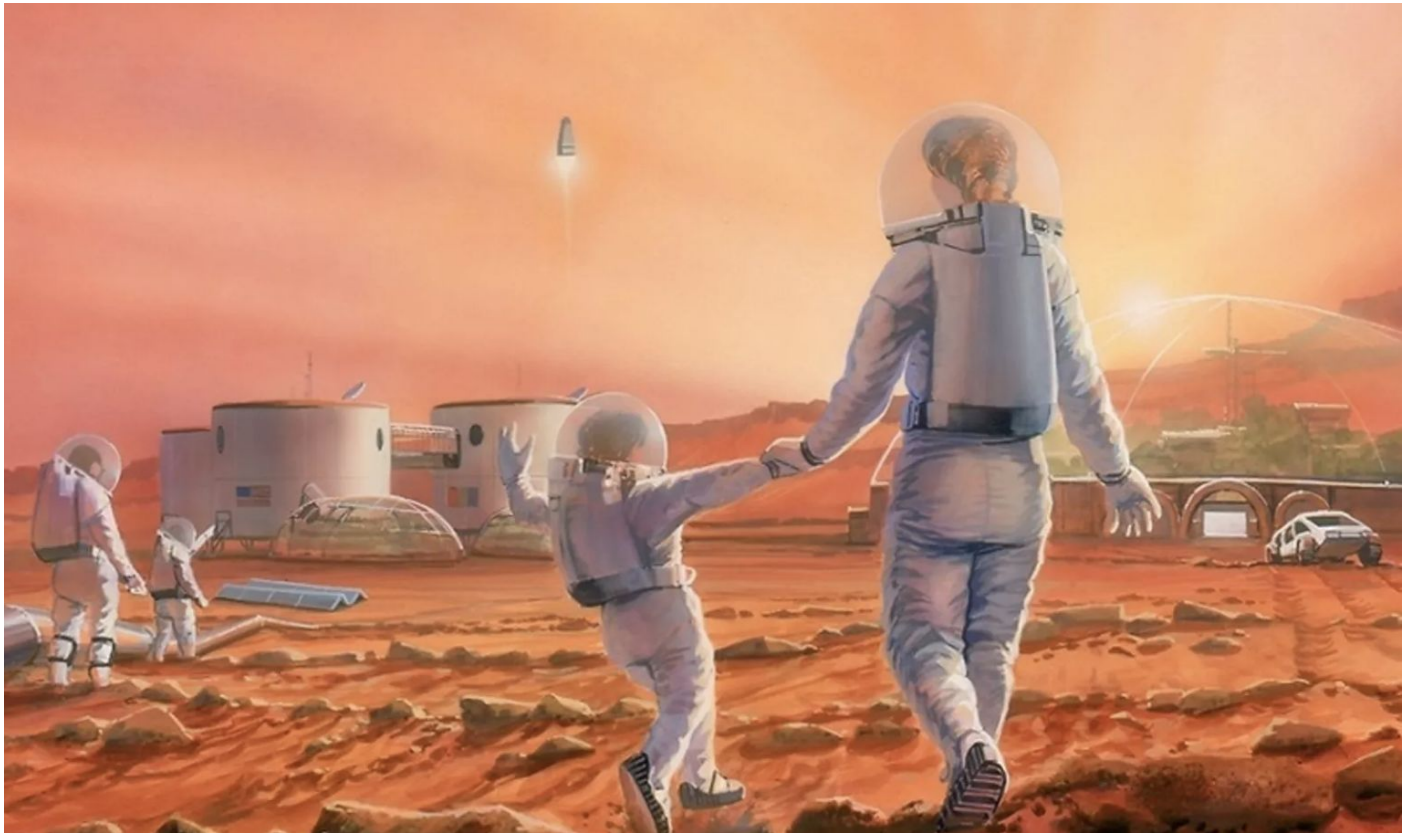- Often misunderstood & hyped (the verge)

Many people believe Blockchain is the solution to decentralization, but the way how we use blockchains today is not realistic. Example today Ethereum blockchain is already 1 TB in size and it's only the beginning. The current way of using Blockchain technology is too inefficient (too many copies, power hungry, long lookup times, …)

Understanding the graph from Bernard makes all of this very logical, because blockchain technologies are at the right side of the curve they are very reliable (resilient) but not efficient, and that is what we see today.

Basically it's the typical cycle, centralized system gets too efficient/centralized, people want something else they go to 100% distributed (blockchain) and now the world will hopefully look for more balance between the two and that is where believe the circular decentralized solution comes in.

ThreeFold

Status of the decentralized internet today?

Does this system exist today? Also at ThreeFold, we are not there yet **but we are very close.**
Probably further advanced compared to any other startup or technology vendor.
We had to re-invent a blockchain, an operating system, and a self-healing IT system.

ZERO-OS = MOST EFFICIENT UTILIZATION OF HARDWARE

Efficient and scalable operating system that eliminates multiple layers of complexity and delivers compute and storage capacity everywhere, much closer to the source of the hardware. Its lightweight architecture makes it cost and energy efficient.

ZERO-OS

**ZERO-CHAIN
DECENTRALIZED CONSENSUS**

More Scalable
Private
Blockchain
Technology

Blockchain
Dilemma Problem
Resolved

ZERO-PEOPLE = SELF HEALING

A major efficiency gain comes from removing the human requirement for deploying and operating IT infrastructure and services.

End 2019 we expect the TF grid to be 100% self healing. This has never been achieved in the history of IT Systems.

ZERO-ROBOT   ZERO-CHAIN

**Scale & Security
go hand in hand**

THREEFOLD

But we are very close.

Our Zero-OS & Zero-Chain is usable and deployed today. The ThreeFold Grid is the first deployment of this unique technology and has been activated Q2 2018.

There are more than 18.000 CPU cores and 90.000.000 GB of storage activated with this technology.
We used our previous generation of self-healing technology to deploy all of this capacity. This technology is not 100% decentralized yet.

Since then we have been working on new technology which is making our 3bot service possible.
This technology is not ready for prime time yet. We are close to launching an upgrade in our TF Grid where the usage of 3bot technology will be introduced. We estimate it will take us until the end of 2019 to call our TF Grid 100% decentralized and self-healing.

ThreeFold Tech is the technology company who developed this technology. ThreeFold Tech is working with chosen technology partners to roll out commercial products. Read the "ThreeFold Tech The First Truly Decentralised & Self Healing IT Solution" document to understand more about the technology behind.

ThreeFold Ecosystem

- ThreeFold Foundation
    - A non for profit organization promoting the growth of the Grid and the digital currency behind (the TFT)
- ThreeFold Tech
    - A for profit software technology company in Belgium
    - ThreeFold tech delivers the technology used by the Foundation as opensource.
    - ThreeFold tech also works with commercial partners to deliver this wonderful technology to companies, banks, governments, …
- ThreeFold Love
    - A 100% sponsored effort to do good for the world.
    - A very practical approach to empower small communities with the benefits of our ideas.
- ThreeFold Ambassadors
    - An independent group of people promoting our ideas into the world.
- ThreeFold Guardians (in process)
    - There will be 60 governance Guardians who are Independent protectors of the ThreeFold Foundation goals & ideas.
    - There will also be 30 technical Guardians who are independent validators of the technology and who will need to get to consensus about when to upgrade software, check that the software has been coded properly in line with the Foundation Ideas.

A larger community is growing, these are companies who are building their own business models around the ThreeFold mission. There is an overview document about this growing ecosystem.