



daisee

internets of energy | energy as a common(s)

BLOCKCHAIN & DIGITAL VALUE CHAIN:
DAISEE AN ENERGY "PONF" (PROOF OF NOT FEASIBILITY)

TERATEC- JUNE 2017

@callmedaisee



<http://daisee.org>

ABOUT THE CONDITIONS OF USE OF THIS DOCUMENT
(under CC-BY-SA & P2P Licenses)

**Only other commoners, cooperatives and nonprofits
can share and re-use the document, but not
commercial entities that intent on making profit
ontop of the commons without explicit reciprocity.**



Short URL of Presentation : <https://frama.link/DAISEE-TERATEC2017>

HI, I'M ONE OF THE DAISEE'S CORE TEAM MEMBERS



@ryu5t

#energy



#gouvernance

@nicolasloubet



@Clement_Epie

#tech



#HW & SW

@LouisVlrd



@samr1

#blockchain

AND we are core **CONTRIBUTORS** OF a larger
community



Rieul Techer
#energy



Samira Rabaoui
#blockchain



Nicolas Loubet
#commons



Clément Epié
#curiosity



Sylvain Pastor
#hardware



Louis Villard
#software



Aude Omerin
#OpenDesign



Alizée Gérard
#TransitionDesign



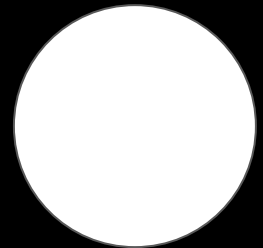
Paul Flipo
#OpenHardware



Xavier Lavayssière
#CodeIsLaw



Timothée Gosselin
#DAOs



Vous?!

Co-produced by



#TiersLieu

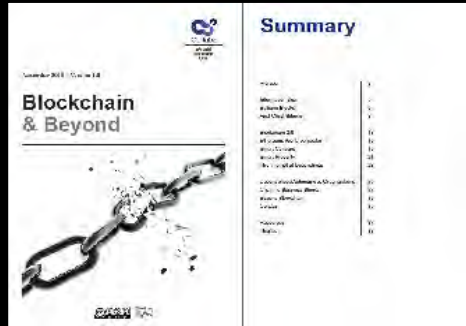


and



Cellabz

#SuperLab



WHY THIS ORGANIZATION IS IMPORTANT ? BECAUSE DIRECTED ORGANIZATIONS FAIL TO SUCCEED

60% of companies' IoT projects do not go beyond POC, says CISCO

Publié le 23 mai 2017 à 16H23



BASICALLY, **daisee** IS NOT a STARTUP

We are a **open research network** of people
and orgs committed to build the Internets of
Energy and build it as **a Common.**

A FEW WORDS ABOUT **commons**

Commons = Shared Resource(s)
+ Community of Contributors
+ Community-Based Rules

WHY WE NEED **commons** ?

Because, the world is complex... We need no more 'users' but **engaged citizens** who govern **their** sustainable way of life.

WHY an OPEN BASIS ?

Our assumption

We **need** to design in the energy world the co-production of shared resources among several players **even competing.**

WHY IS THAT WE THINK ABOUT **Energy as a common**

In the long run

Renewable electricity price ↘

→ See Energy as abundance
Even if Energy IS NOT abundant

Emergence

More and more local energy producers

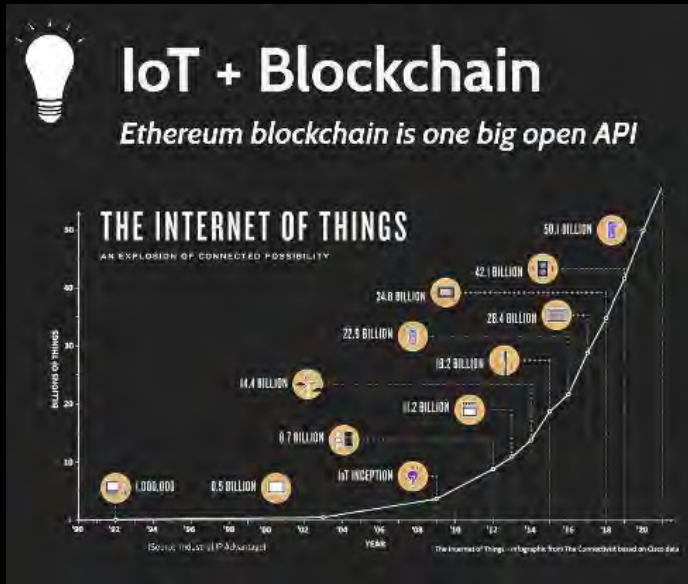
≠

Production centralization

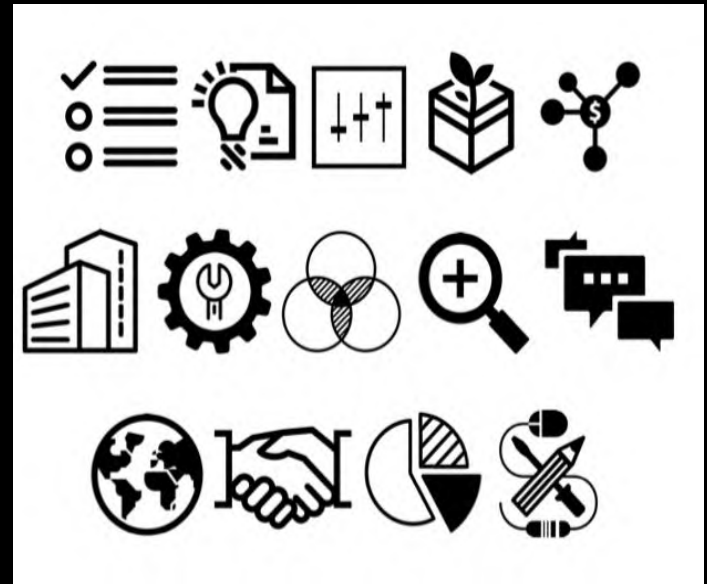
→ Requires to rethink the governance

Decentralized Autonomous Interconnected System for Energy Efficiency

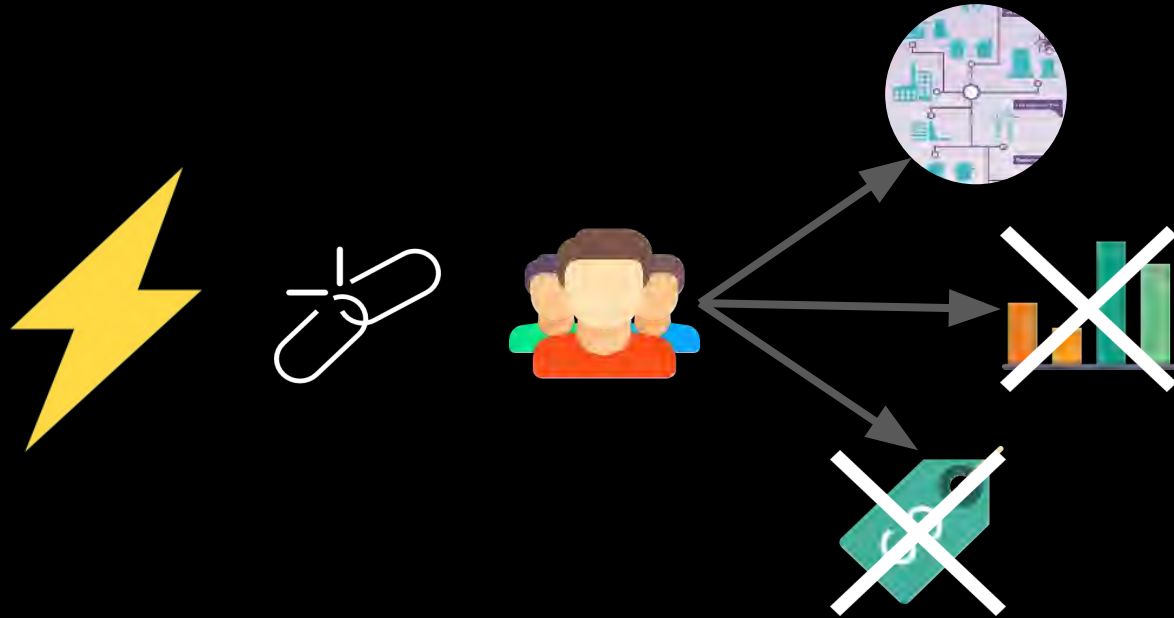
InternetS of Energy



Energy as a Common(s)

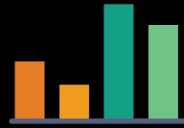


REBUILDING THE LINK BETWEEN THE PRODUCER AND THE CONSUMER



Based on a DISTRIBUTED energy data and PHYSICAL INFRASTRUCTURE

Electricity Data
(consumption and production)



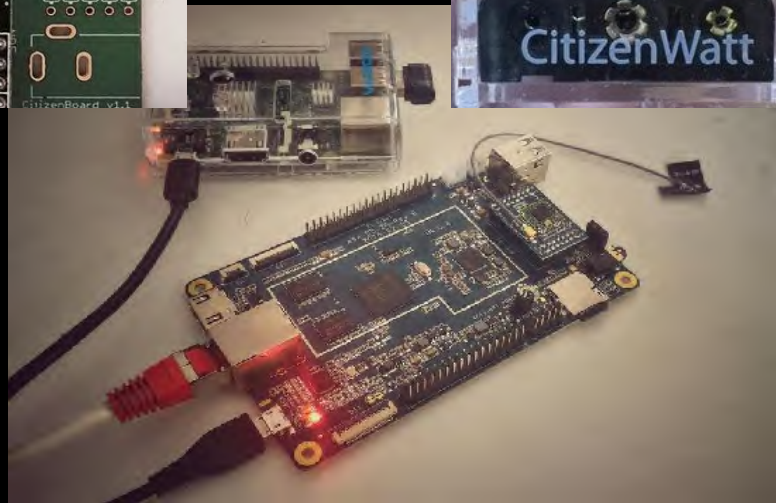
Infrastructure (distributed)



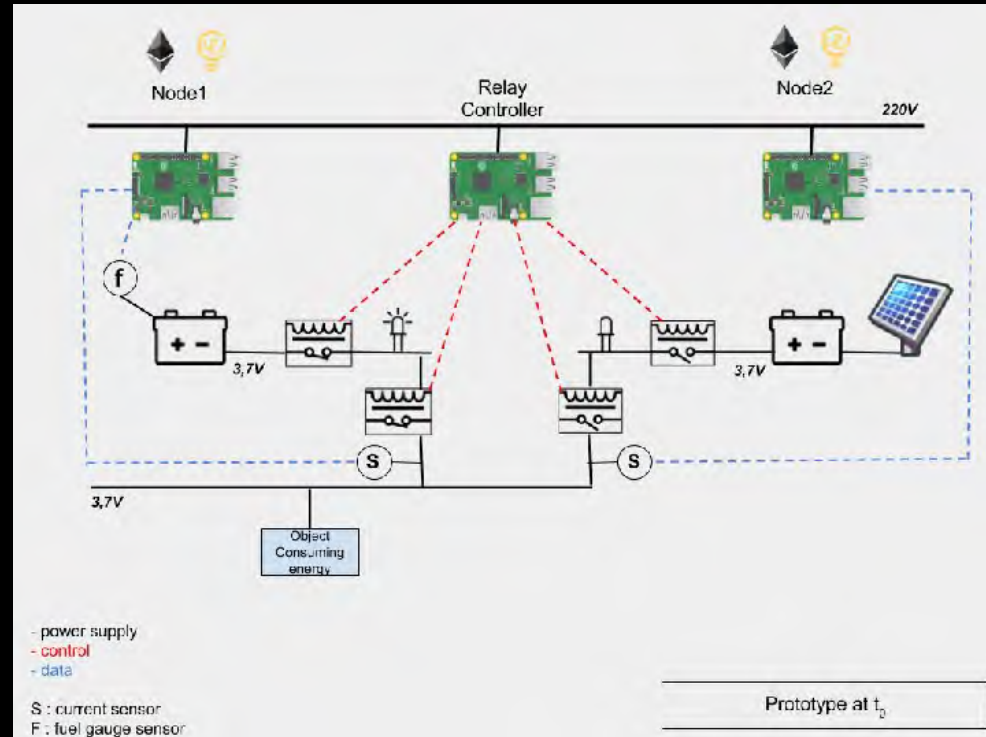
Local market place



Infrastructure "Hardware" IoT "BLOCKCHAIN FRIENDLY"

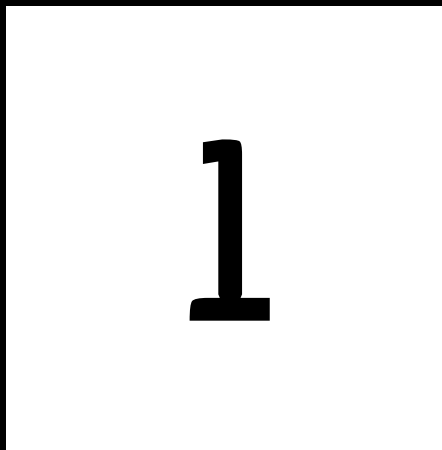


EXPERIMENTAL PROTO V0.2 FROM POW > POA



WHAT WE'VE LEARNT FROM OUR FIRST
run OF experiment (POW BASED)

BULLSHIT IS everywhere



data transfer costs

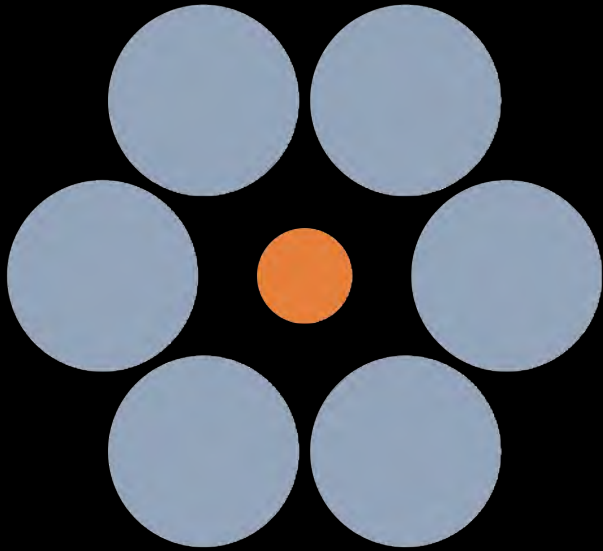


2

THE LOW-COST OF small-amount transactions is verified in THE CASE OF LIMITED INTERACTION WITH THE BLOCKCHAIN.

IF **CONTINUED** and **PERMANENT INTERACTION** WITH THE BLOCKCHAIN IS REQUIRED, THEN **THE FEES PILING UP** can entails HIGH amount BILLS.

FULL BLOCKCHAIN BASED REAL TIME TRANSACTION IS COMPLEX



3

"REAL-TIME TRANSACTION POSSIBLE" : IT IS FASTER THAN A WESTERN UNION TRANSACTION.

HOWEVER, FOR A BLOCKCHAIN USED ON A REGULAR BASIS, TAKES FROM A FEW SECOND TO FEW MINUTES. THIS IS NOT REAL-TIME.

BLOCKCHAIN are NOT BUILT FOR DATA STORAGE

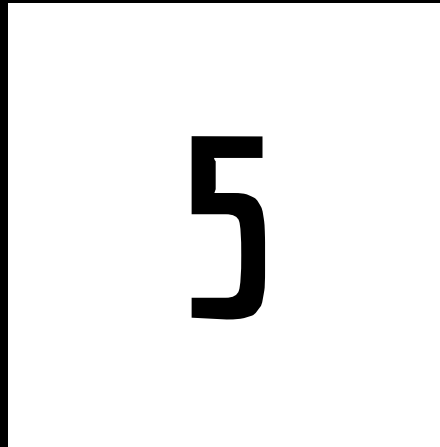
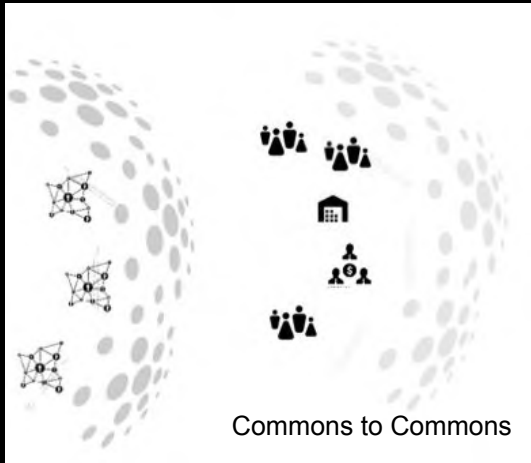


4

BLOCKCHAIN TECHNOLOGIES *are NOT DESIGNED TO STORE HUGE AMOUNT OF DATA*, SINCE THE MORE DATA YOU STORE, THE HEAVIER THE BLOCKCHAIN.

YOU LOOSE IN FLEXIBILITY AS WELL AS IN DISTRIBUTED POTENTIAL.

common Based work is a necessity



Common
=
Shared resources
+
Community of contributors
+
Community-based rules

ACTUALLY WE DO NOT NECESSARILY NEED BLOCKCHAIN ... CONSIDERING UNCHANGED INDUSTRIAL PARADIGM



SMART ENERGIES @SMART_ENERGIES

6 juin 10:37 · [Twitter for iPhone](#)

.@powerpeers at #SmartEnergies: We don't need a [#blockchain](#)! We're experimenting with it, but we don't need it!



Blockchains Have No Killer App

- Largest gains will come in areas which are underserved due to:
 - Extreme specialization (eg. "international cross-border trading of vintage cars")
 - Legal issues
 - Internationality
 - Small scale (eg. "legal systems" for machine-to-machine micropayment economies)

Then... WHAT ABOUT **BLOCKCHAIN** ?

Blockchain technologies alone are (really) **useless**

BUT

the (original) underlying philosophy is (em)powerful to
think the future of our **critical infrastructures**.

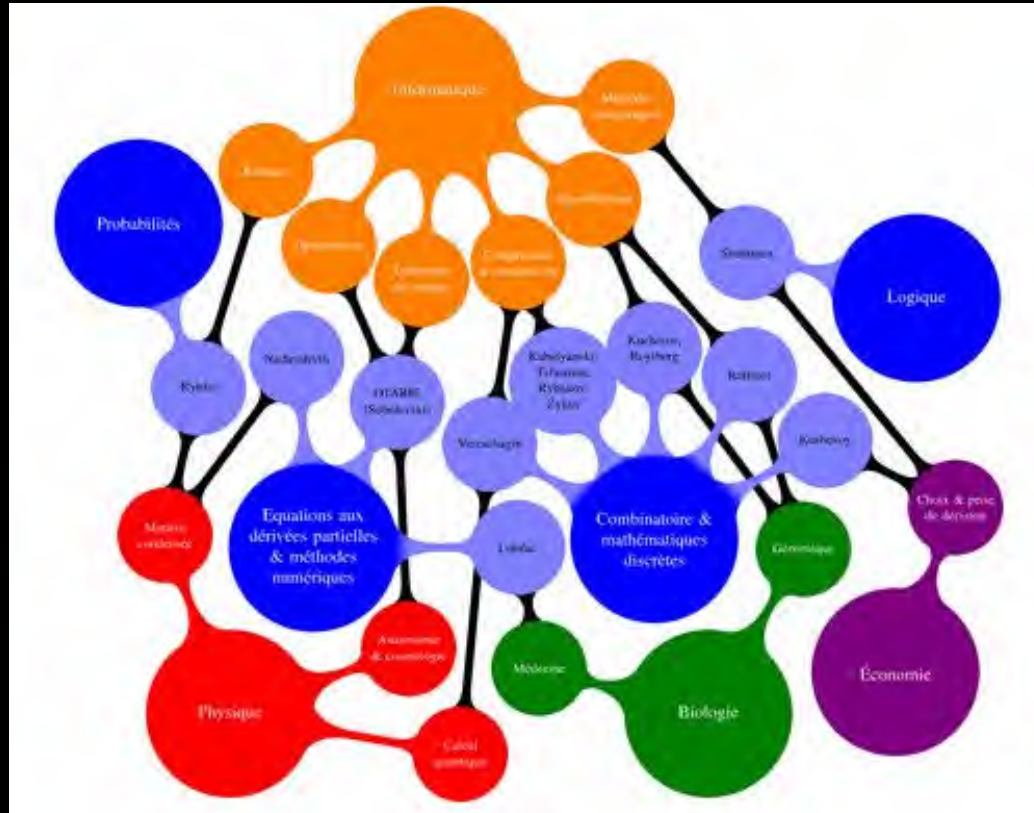


TECHNOLOGY IS
THE ANSWER BUT
WHAT WAS THE
QUESTION?

CEDRIC PRICE

What is our focus now?

2- WE HYBRIDIZE TECHNOLOGIES



3- PRODUCE commons

URBAN Commons



Territories ready to co-deploy DAISEE

INDUSTRIAL Commons



Experts organisations to co-develop DAISEE

EXPERTISE Commons



Passionated contributors to co-create DAISEE

3- consider POLITICS

IF TECHNOLOGY
(ALGORITHMS)
HELPS
managing
(common)
GOODS
THROUGH
shared
governance
WITH CODE



AND THAT CODE IS LAW ... **WHO SET THE GOVERNANCE
rules ?**



daisee



@ryu5t



@samr1

DAISEE.ORG

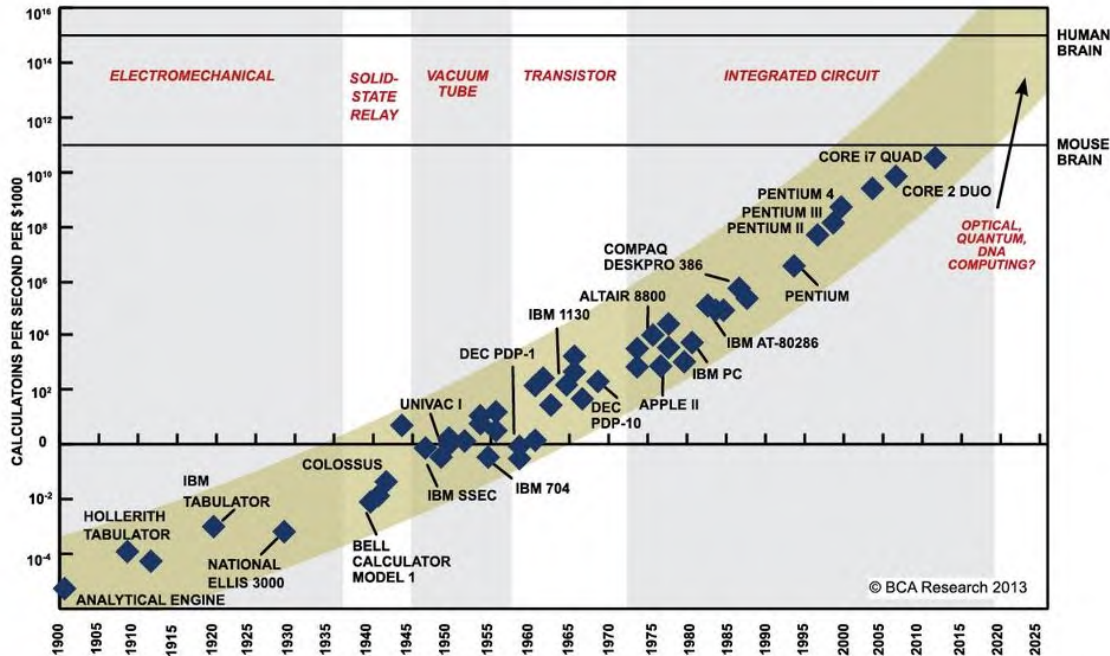
The context



How can we **survive** the anthropocene?

What we're witnessing ...

EXPONENTIAL EVOLUTION OF THE TECHNOLOGIES



SOURCE: RAY KURZWEIL, "THE SINGULARITY IS NEAR: WHEN HUMANS TRANSCEND BIOLOGY", P.67, THE VIKING PRESS, 2006. DATAPPOINTS BETWEEN 2000 AND 2012 REPRESENT BCA ESTIMATES.

In ALL the industrial sectors



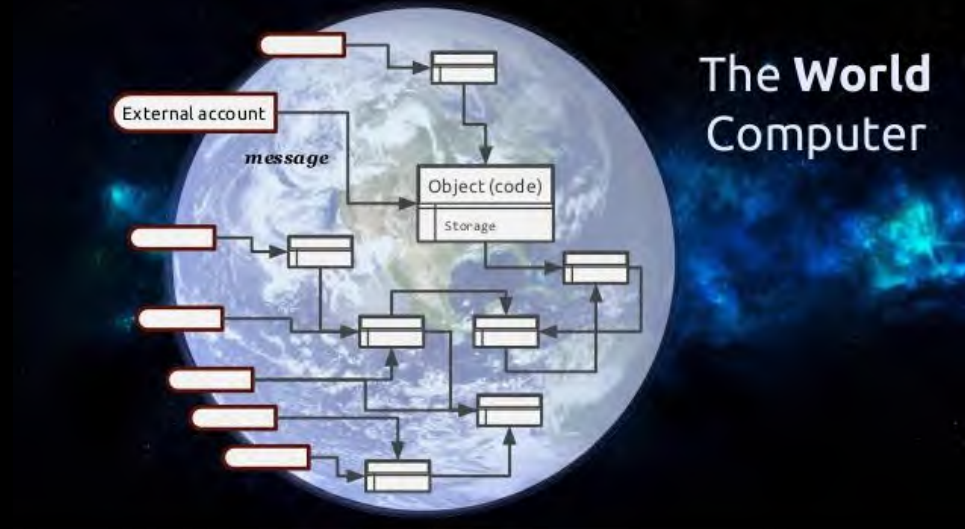
A STRONG **interdependency** OF THE NETWORKS | ELECTRICITY

From Tesla for instance who shaping both electricity use and distribution



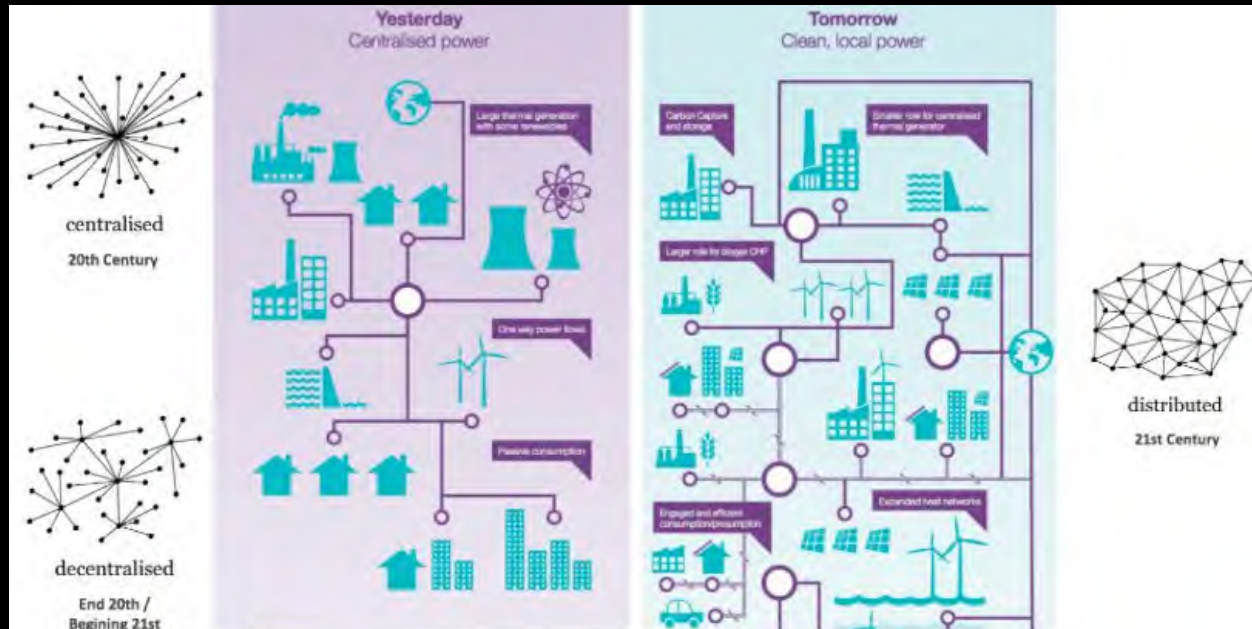
A STRONG **interdependency** OF THE NETWORKS | IT & TELCO

To IT and Telco with the blockchain trend for instance (Ethereum) pushing to redefine how we think a distributed peer-to-peer network






A **HYBRID** and **COMPLEX** WORLD

In any industrial sector, from agriculture to energy, from transport to building there's a tendency towards distributed systems



What's coming ...

By 2050, there will be nearly
10 billion people on Earth.

 = Children  = Working age  = Elderly

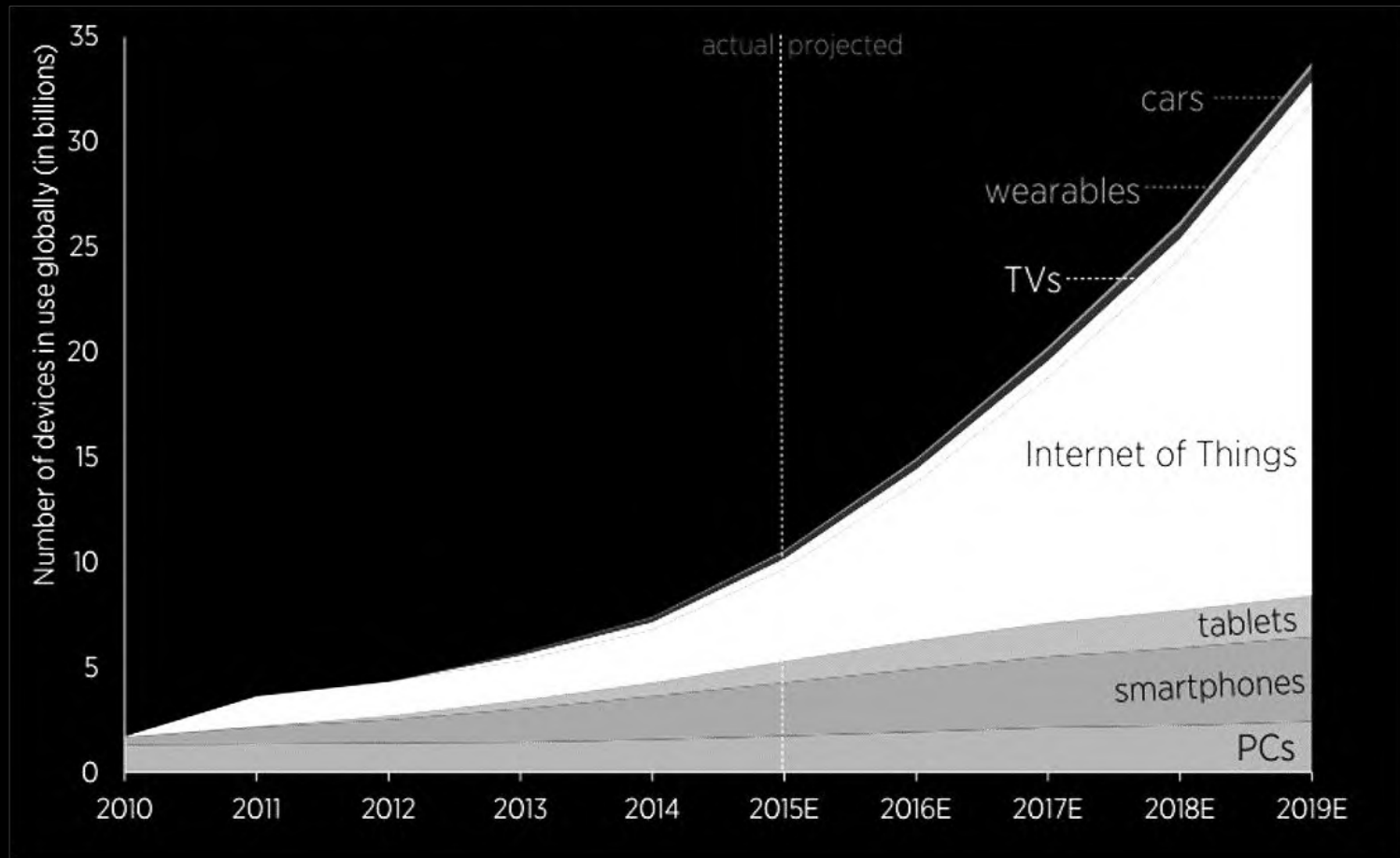


REALLY... IT'S NOT a JOKE

If no measure is taken, the energy needed to power the infrastructure of the Web **in 2030** would be tantamount to the energy consumed by humanity in 2008.*

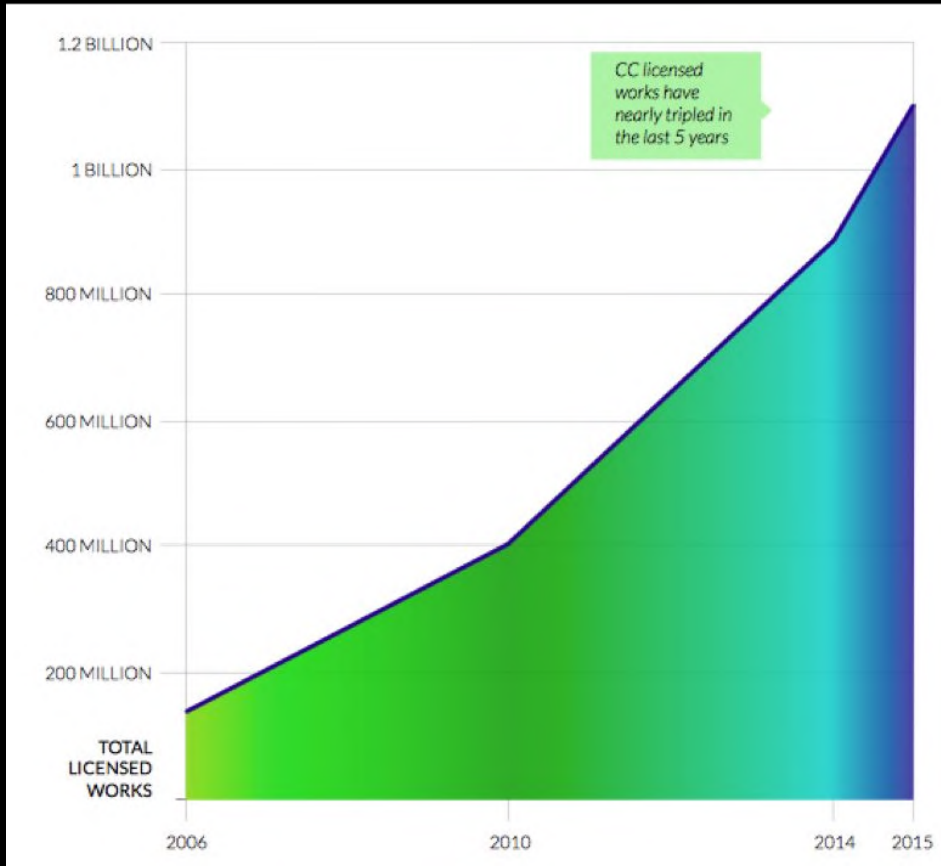
* W3C [Web We Can Afford Community Group](#)

Figure 2. The Internet of Everything: Devices in Use Globally



Source: John Greenough, "The Internet of Everything 2015," *Business Insider Intelligence*. Produced by Adam Thierer and Andrea Castillo, Mercatus Center at George Mason University, 2015.

DIGITAL commons



Who are we ?

Build great community
with ALL the expertises
need to remix the world.



Rieul Techer
#energy



Nicolas Loubet
#governance



Clément Epié
#curiosity



Samira Rabaoui
#data



Paul Flipo
#hardware



Xavier Lavayssière
#ethereum



Aude Omerin
#design



Louis Villard
#code



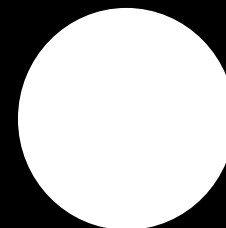
Timothée Gosselin
#busines



Alizée Gérard
#design



Sylvain Pastor
#hardware



You ?!
#SuperPower

PRAGMATIC
TECHNOLOGY AGNOSTICS

ETHICAL & CURIOUS

EXPERT & NON-EXPERT
CIVIC-ENTREPRENEURS

Co-produced by

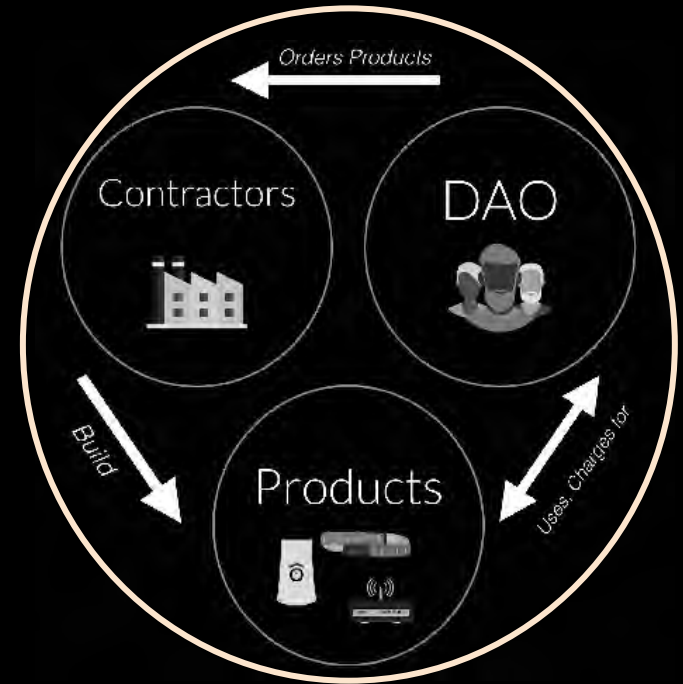


#TiersLieu



On more thing...

We DO love DAOs.
We're working on it...



Slock.it

AND WE THINK **DAO IS DESIGN** FIRST

our increasingly **complex society** requires
more design (...) **design** has grown from
'nice to have' to '**need to have**'

Where supermarkets in the 1960s stocked 1000
products, today's supermarkets carry between 20,000
and 40,000 items. All these products need to be
created, produced, marketed, bought and used

because solutions will have to **survive into a future**
different from today, the ability to design well
becomes more important

"Open Design Now" - Bert Mulder