Blockchain – Friend or Foe?

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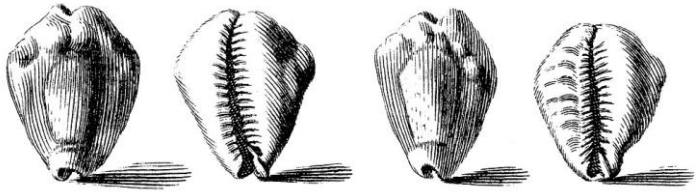
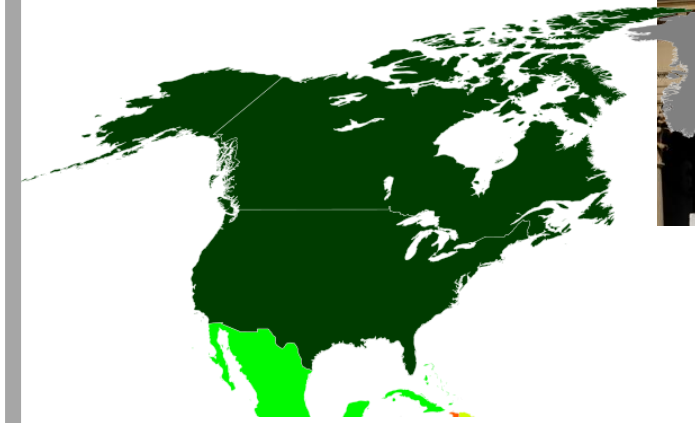




UN Human Development Rept 2016

Trust

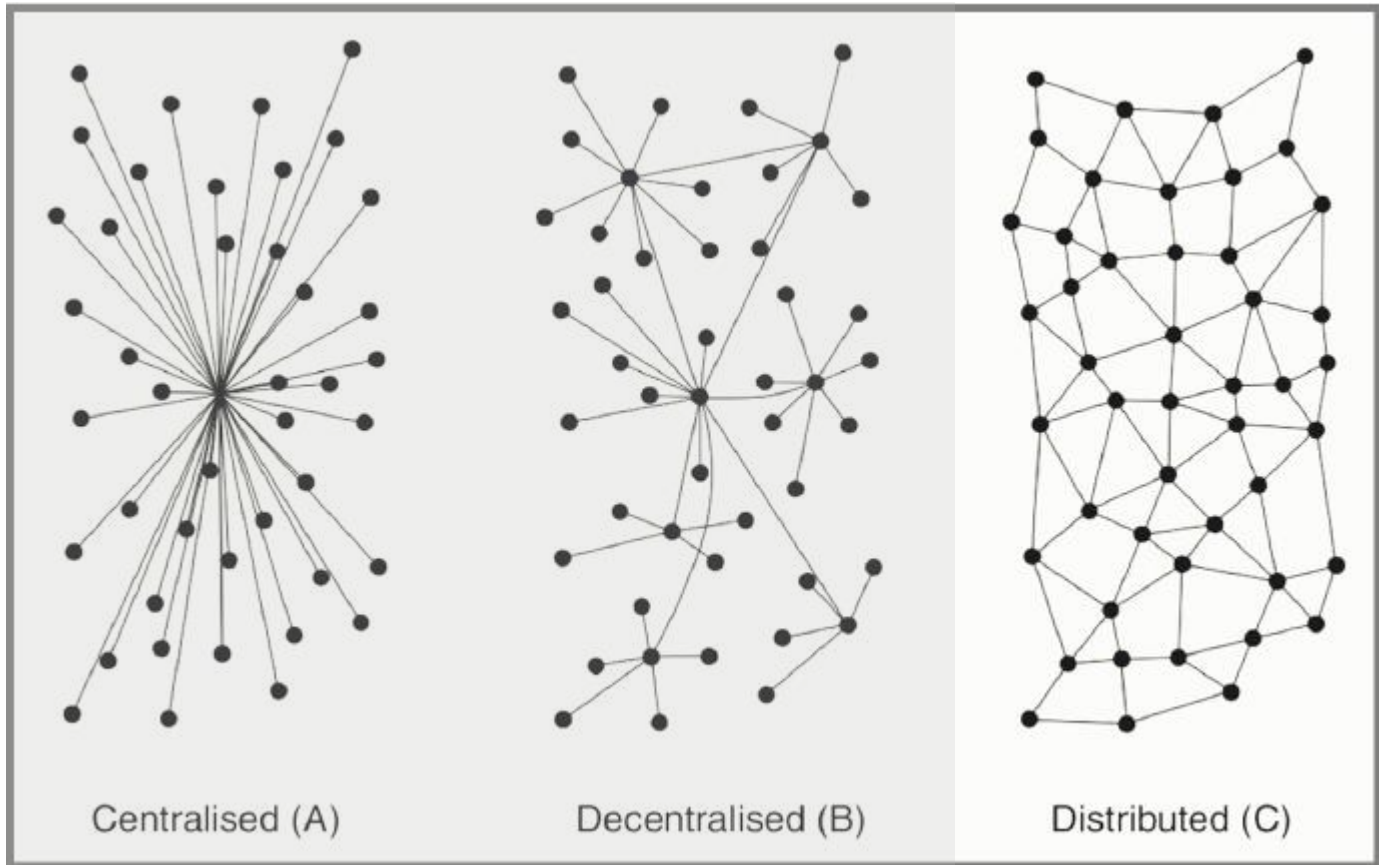
“Imagine there's no countries / It isn't hard to do” – John Lennon

Imagine:

Open
Full Consensus
No Trust Needed
Fully Distributed

Transactions

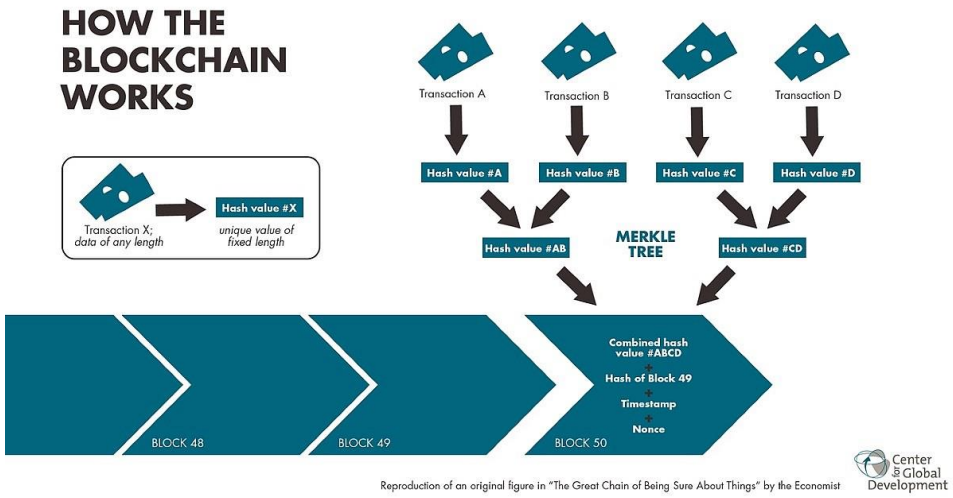
Over the *internet*.



Diffused Art and Diffracted Objecthood: Painting in the Distributed Field - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/Centralized-decentralized-and-distributed-network-models-by-Paul-Baran-1964-part-of-a_fig1_260480880 [accessed 8 Mar, 2018]

Classic Blockchain.

Classic Blockchain.



Open, distributed, decentralized ledger that requires everyone to attempt to build it all the time.

Anyone can join.

Everyone has a chance on making the next "permanent entry" – it's a lottery!

Ledger Entries are very computationally intensive, and depend on the entire previously solved ledger – but almost all of the work doesn't result in a recorded entry.

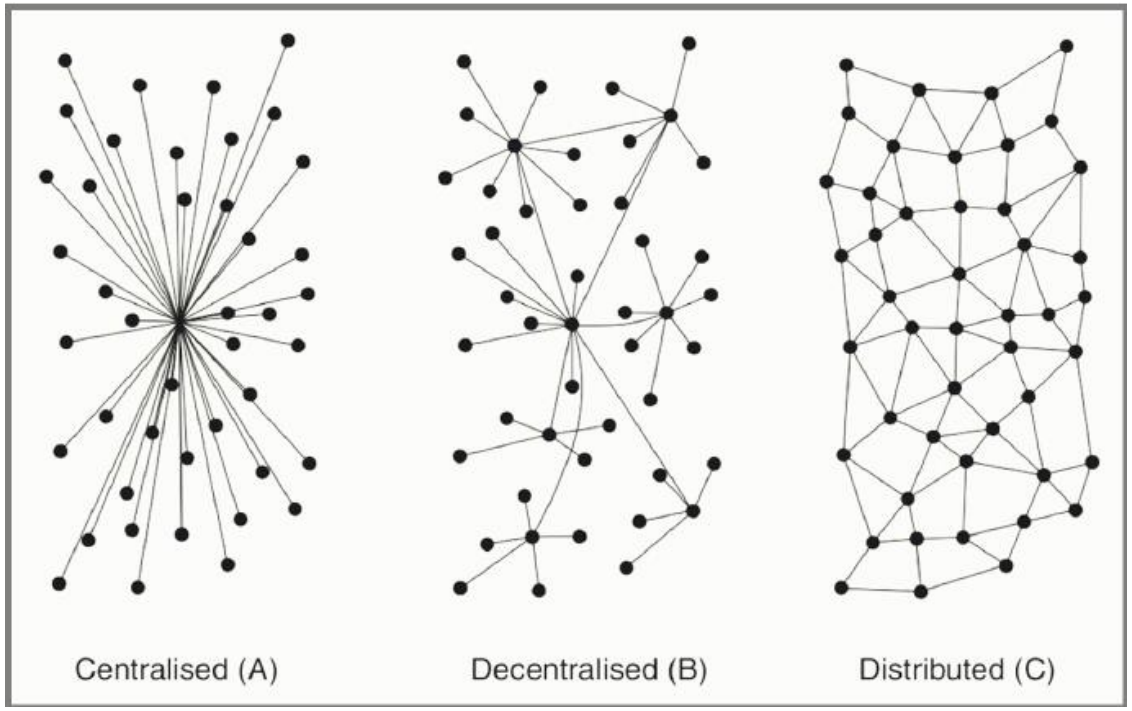
Everyone does it to get a reward.

No centralized authority.

<u>Everyone trusts it</u> due to the distributed, intensive work required. "proof-of-work"

How much are <u>you</u> willing to pay for open, distributed, inherent trust?

INVISIBLE COST – distributed computation is hard to measure and easy to steal.



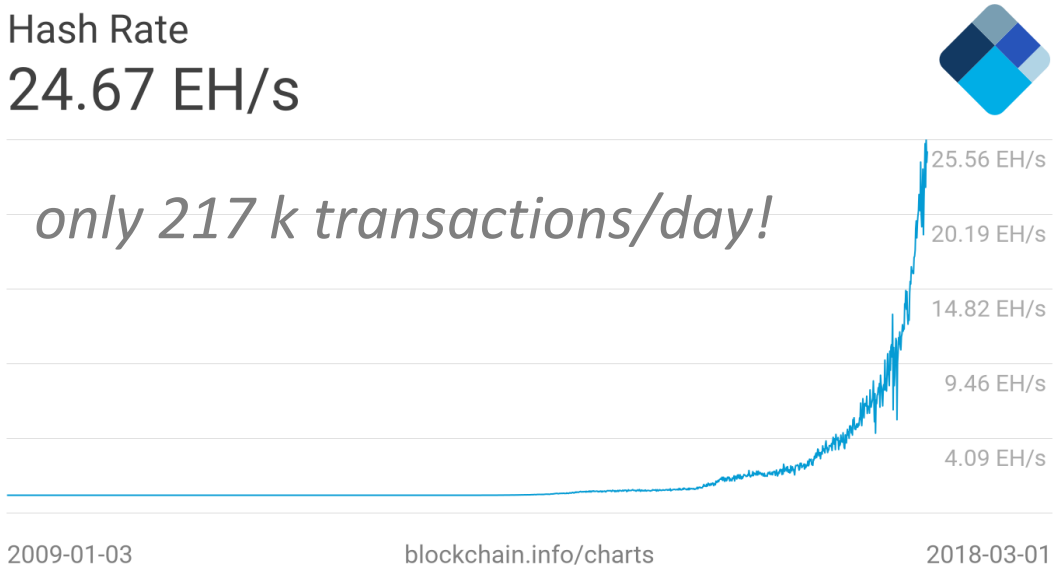
Unexpected Consequences? Issues of SCALE

1 *single* transaction

= 27 houses powered PER DAY

= carbon in 43 GALLONS of gas (386 kg CO_2)

Uses more energy than Bangladesh



BECI: https://digiconomist.net/bitcoin-energy-consumption

SCALE: How bad is it?

1 “classic” bc transaction = 789 kwh (BECI)

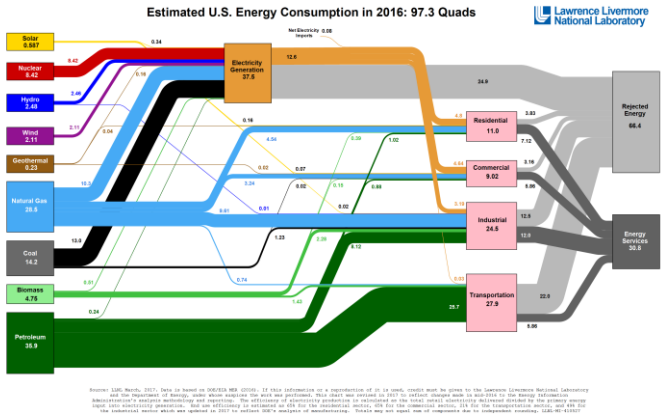
1 Visa transaction = 0.00169 kwh

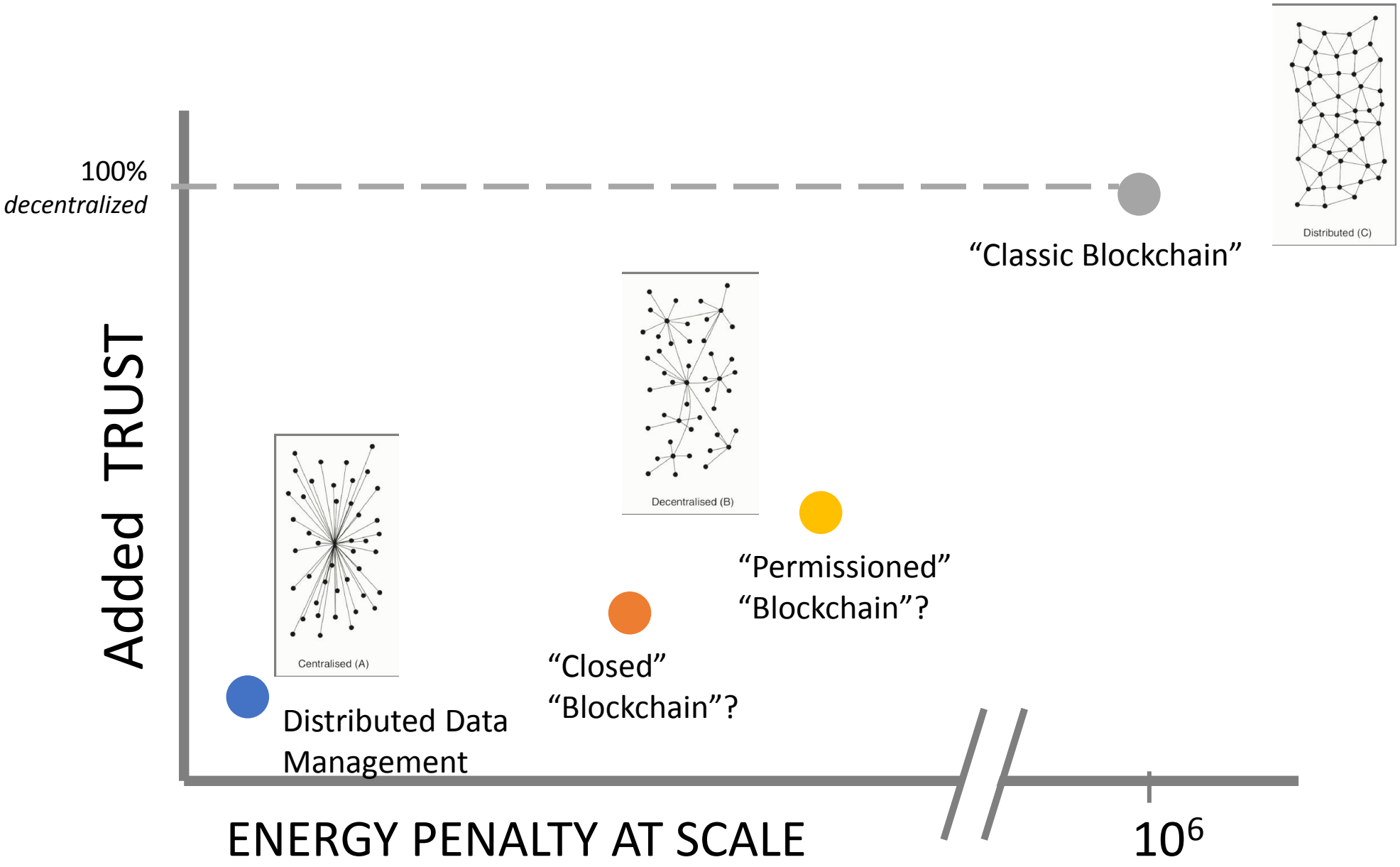
“Classic Blockchain” Energy Penalty: 10^6 !!!

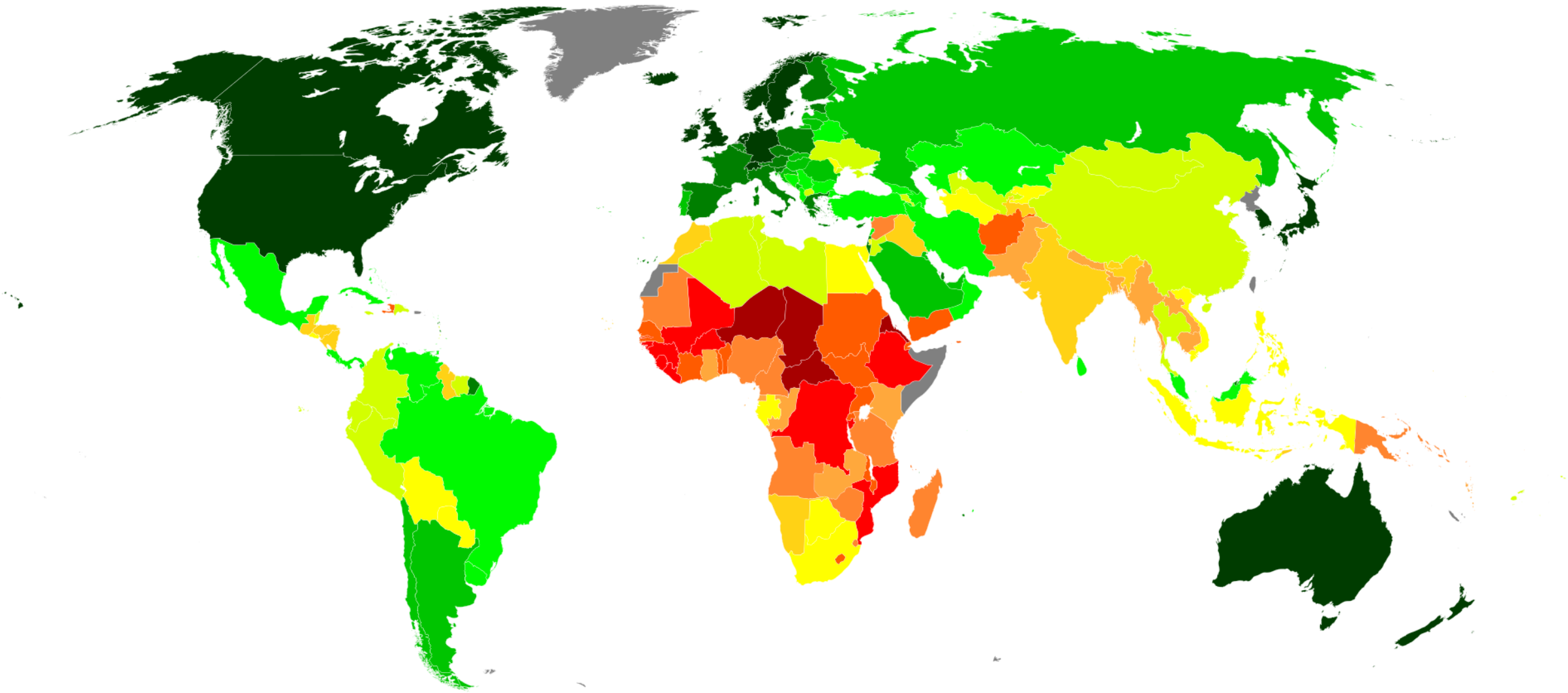
103 billion credit card transactions in US (2015)

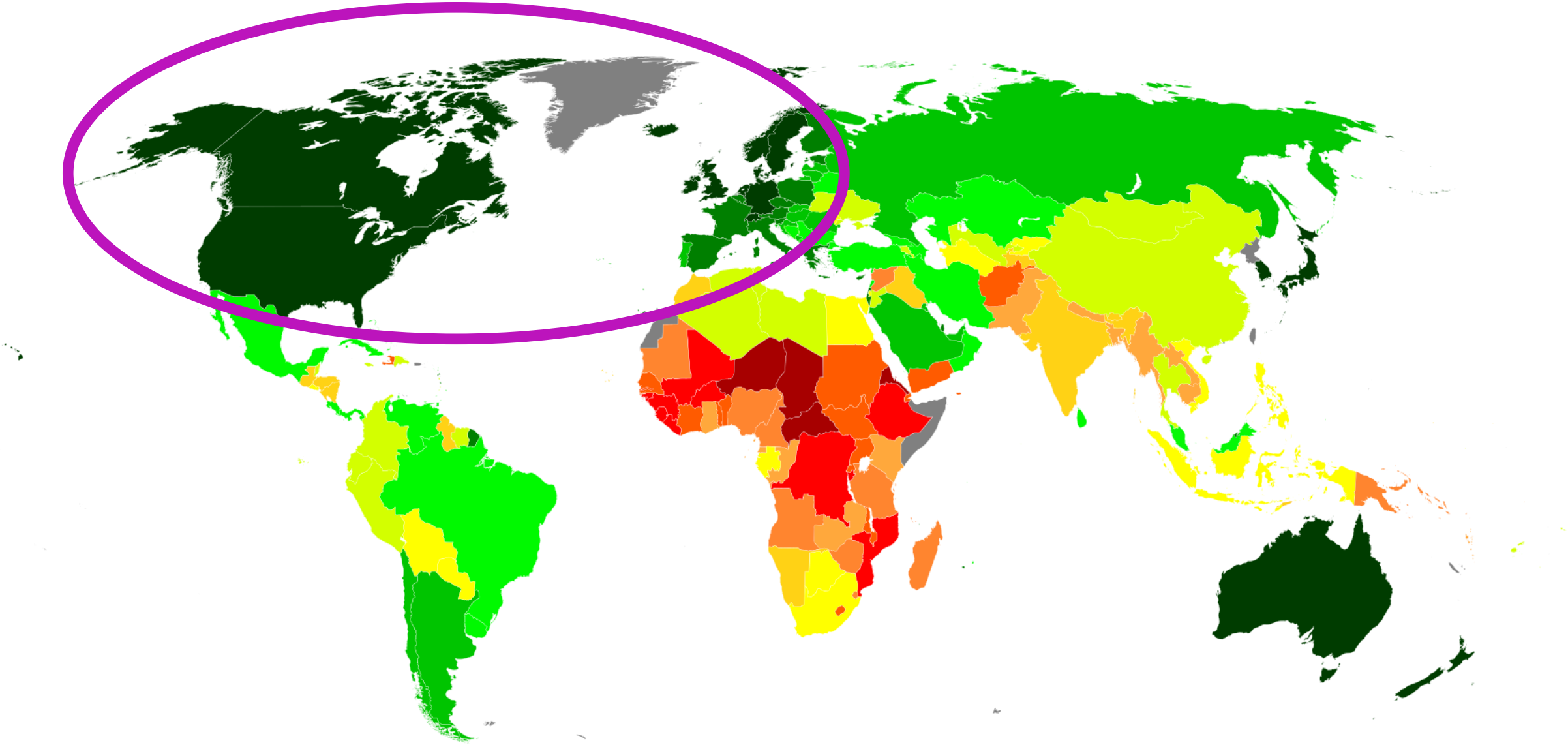
Federal Reserve Payments Study 2016

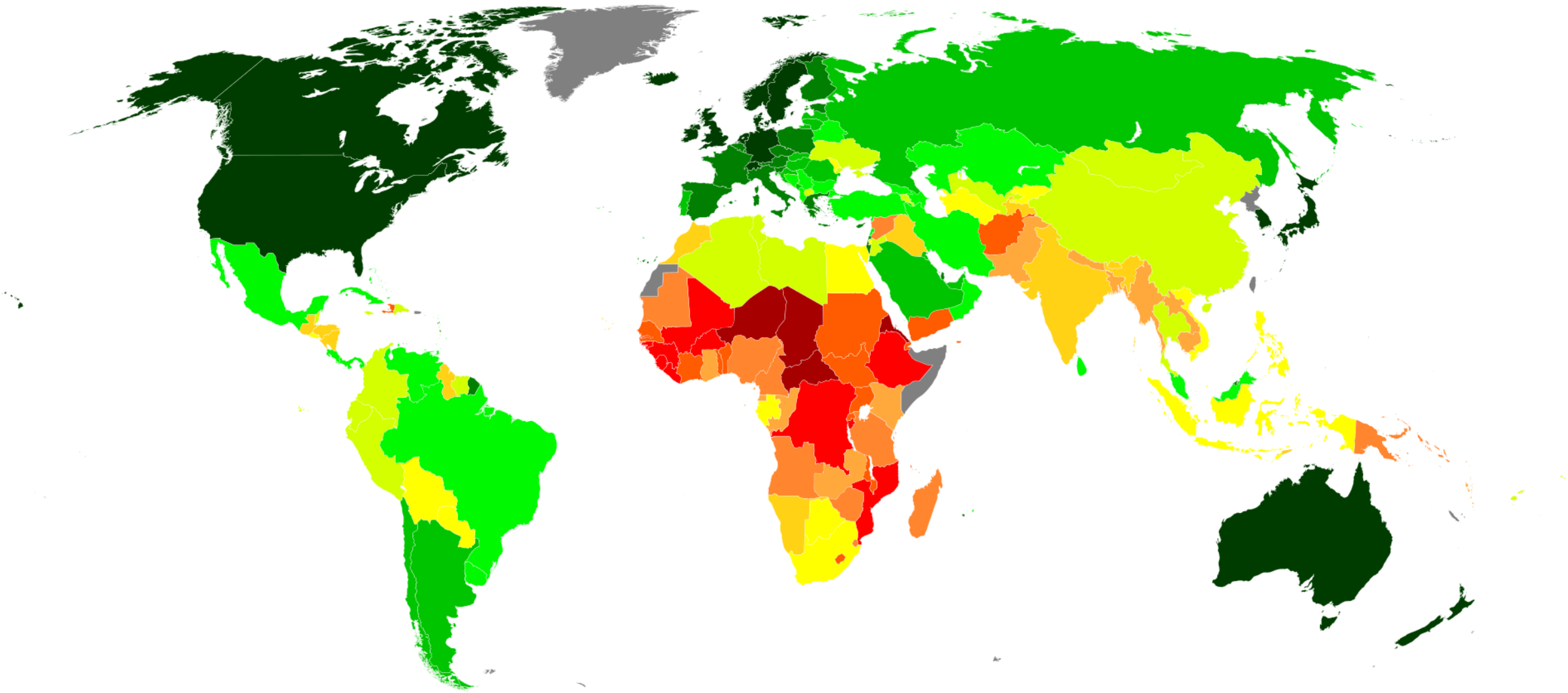
=81 TRILLION KWH = **277 quads**

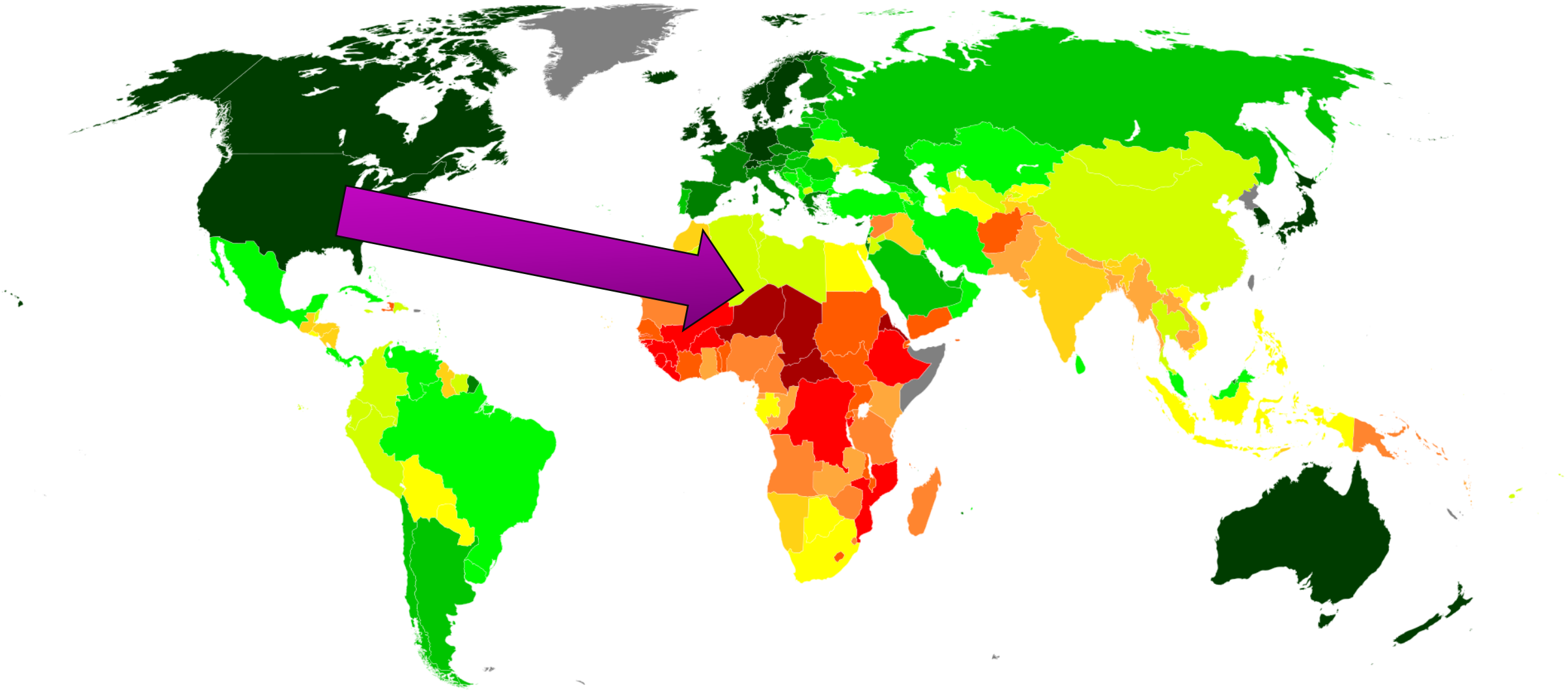


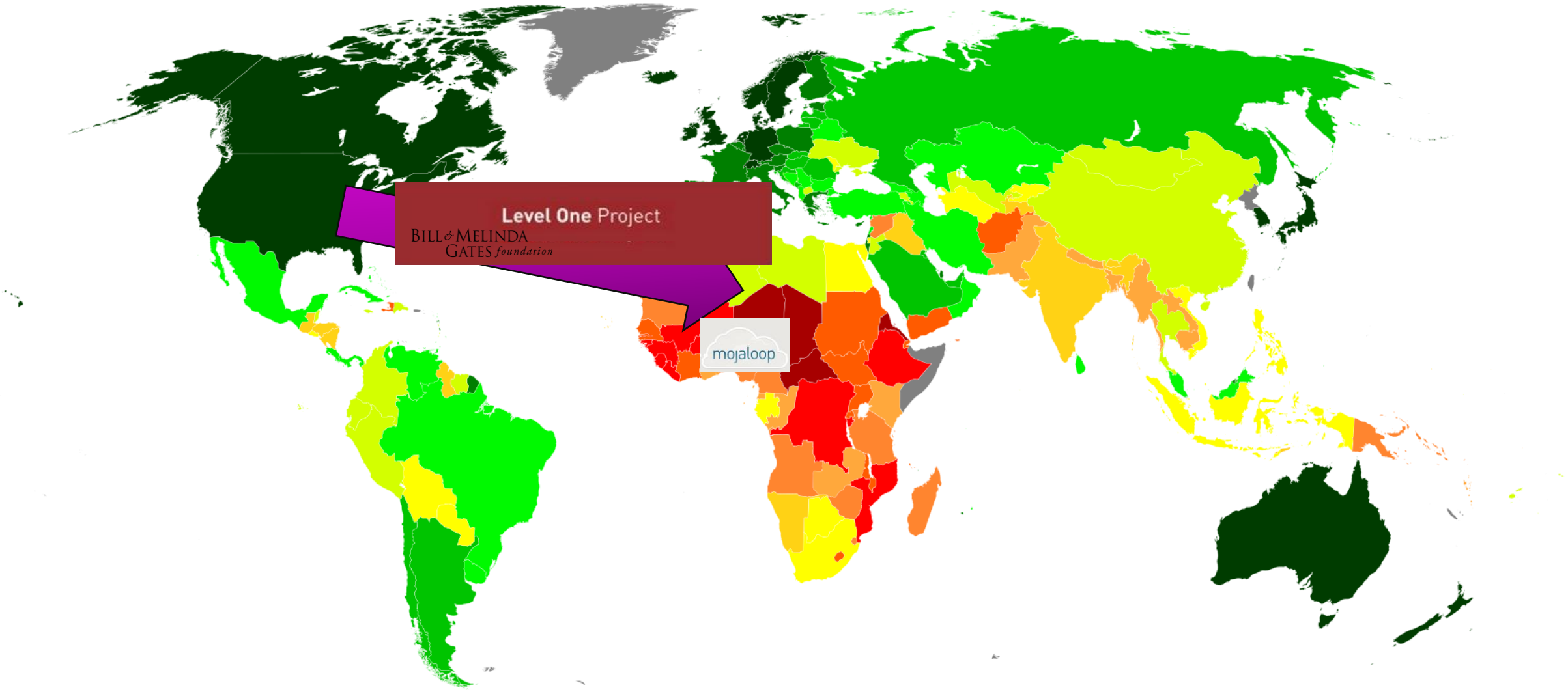

100%
decentralized
Added TRUST
Distributed (C)
"Classic Blockchain"
Decentralised (B)
"Permissioned"
"Blockchain"?
Centralised (A)
"Closed"
"Blockchain"?
Distributed Data
Management
ENERGY PENALTY AT SCALE
10^6

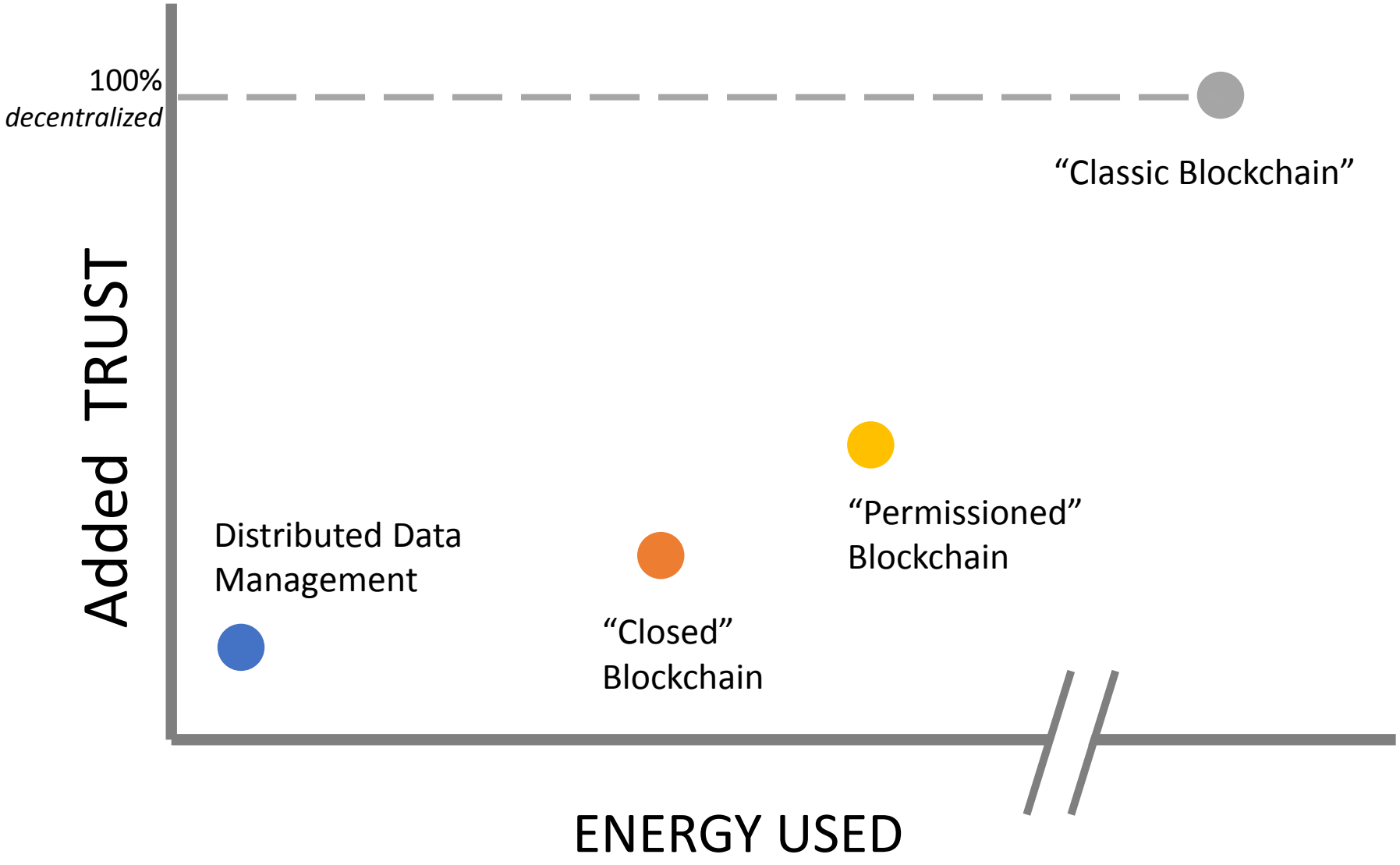









Level One Project
BILL & MELINDA GATES foundation
mojaloop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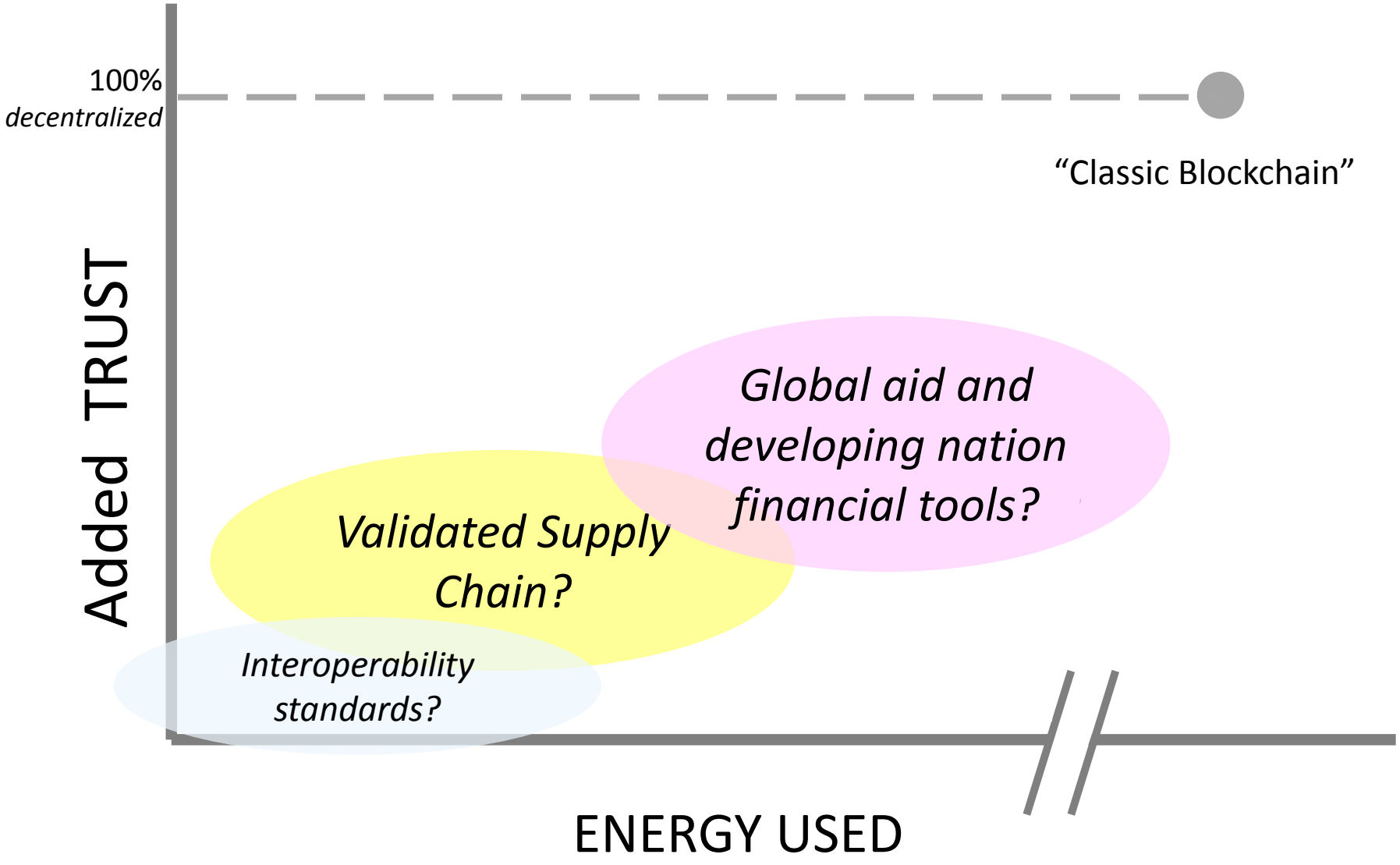
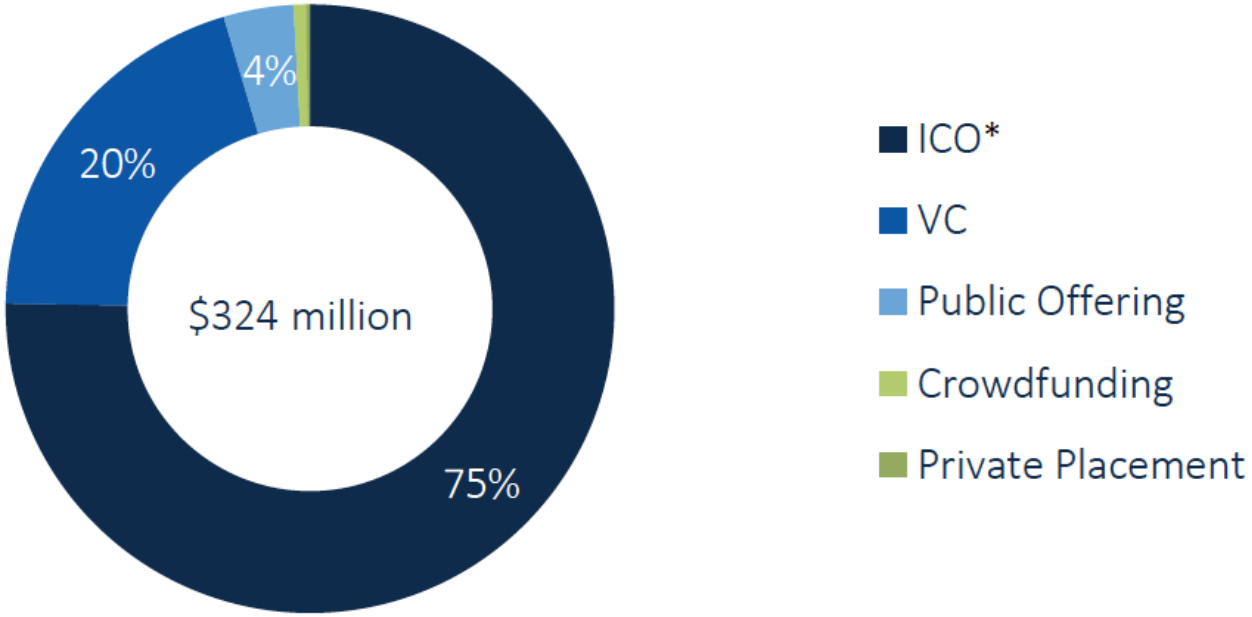

100%
decentralized
"Classic Blockchain"
Added TRUST
Global aid and developing nation financial tools?
Validated Supply Chain?
Interoperability standards?
ENERGY USED

This is happening NOW.

Funds Raised by Type of Funding Mechanism



Source: GTM Research

*ICO includes both pre-ICO and ICO funds

-Colleen Metelitsa

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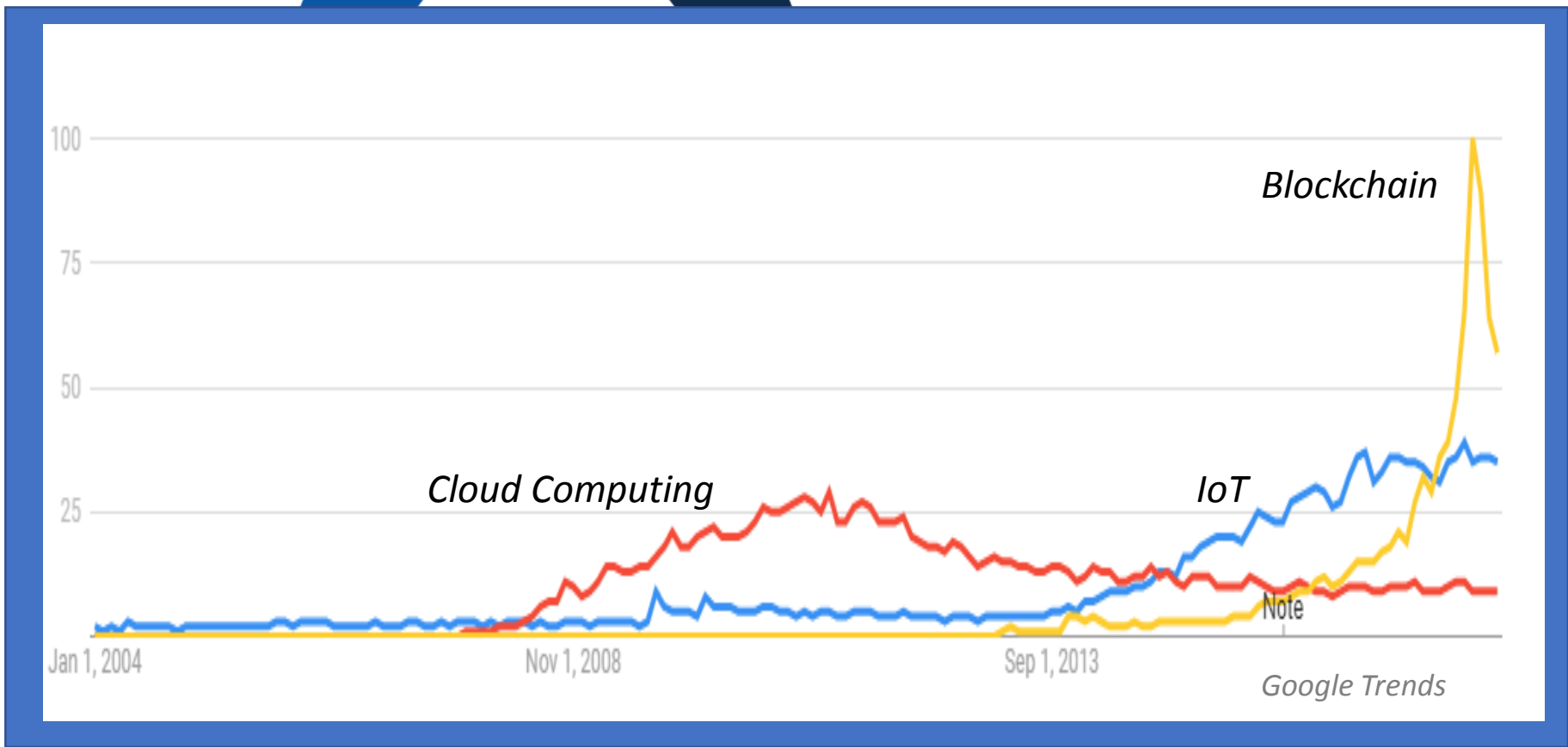
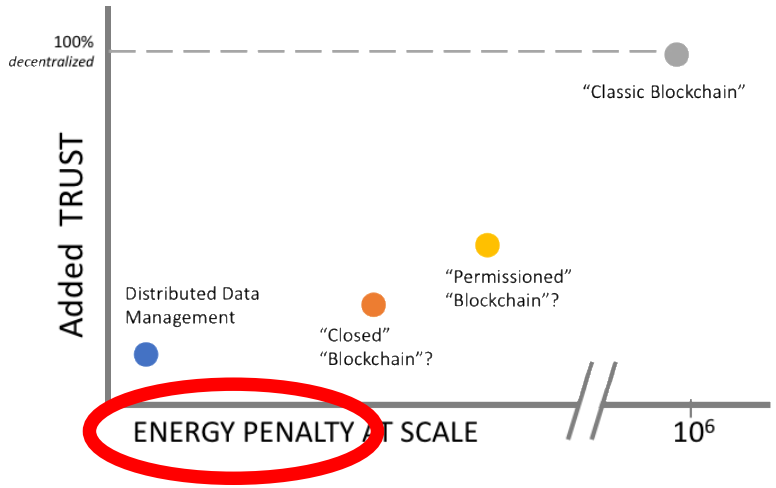


Informed decision making?



- What system is being proposed?
- What is your ROI?
- How do you choose?

We need a tool – <u>an energy audit tool</u>.

For "<u>Blockchain</u>".

Thank you

Concerns, questions, ideas, complaints:

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