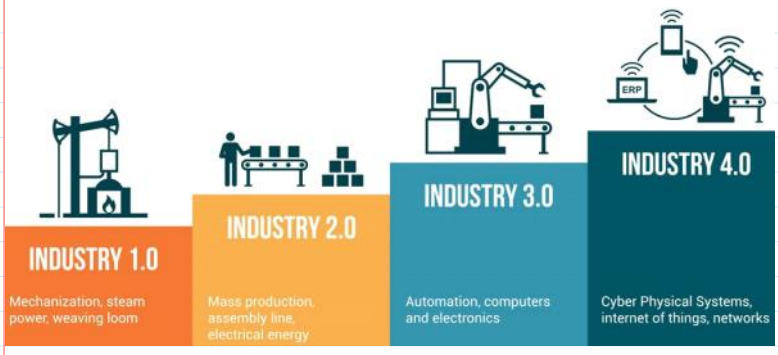
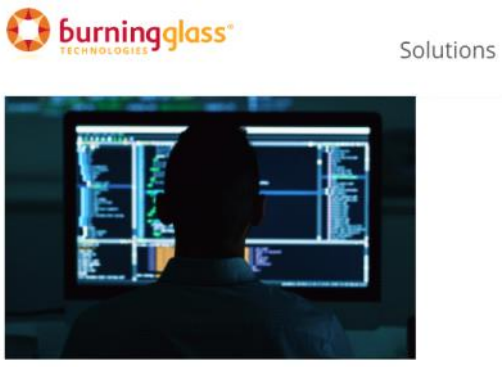


Skills of Mass Disruption Tecnologies
Įgūdžiai Masinio Proveržio Technologijose



Fintech: Skills related to technologies such as **blockchain** and others aimed

at making **financial transactions more efficient and secure**.

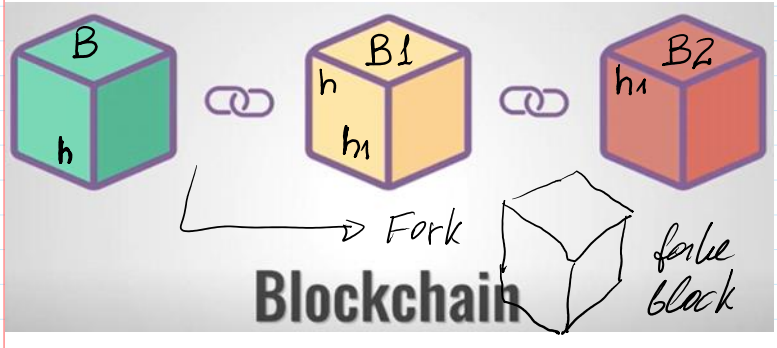
Table 1: Job Openings and Growth by Disruptive Skill Area

Skill Area	Total Job Openings (Last 12 Months)	Projected 5-Year Demand Growth
Software Dev Methodologies	634,660	35%
Cloud Technologies	462,963	28%
Proactive Security	373,123	39%
IT Automation	282,380	59%
AI and Machine Learning	197,810	71%
Connected Technologies	68,313	104%
NLP	36,941	41%
Fintech	35,667	96%
Parallel Computing	11,056	17%
Quantum Computing	2,718	135%

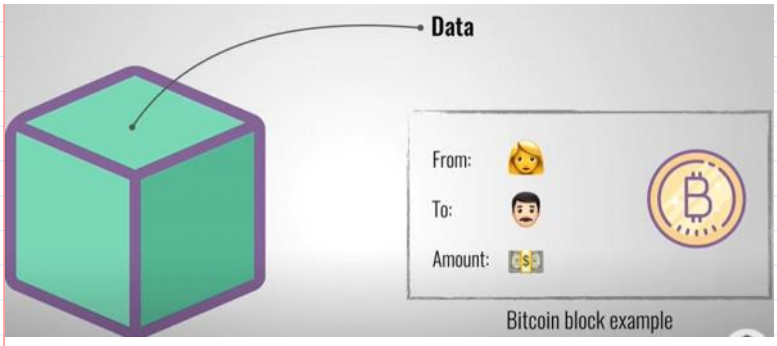
Table 3: Average Salary Premium by Disruptive Skill Area

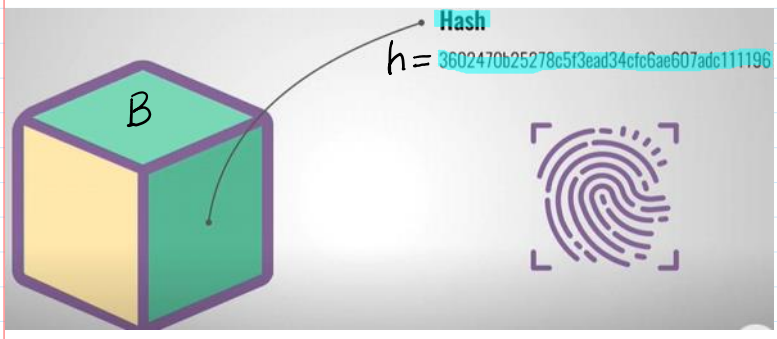
Skill Area	Average Salary Premium
IT Automation	$24,969
AI and Machine Learning	$14,175
Fintech	$13,799
Software Dev Methodologies	$13,762
Connected Technologies	$10,873
Cloud Technologies	$10,588
Proactive Security	$8,851
Parallel Computing	$7,797
NLP	$6,368
Quantum Computing	$4,204

Students and Job Seekers.
Identify and Learn High-Value Disruptive Skills.
The disruptive tech skills are growing rapidly and can lead to significant salary boosts.
Individuals who identify and develop these future-ready skills – and continuously update their skill sets as new needs emerge – will be best-positioned to enhance their career prospects, both in tech and beyond.



51% of network computing power ⇒ fake chain



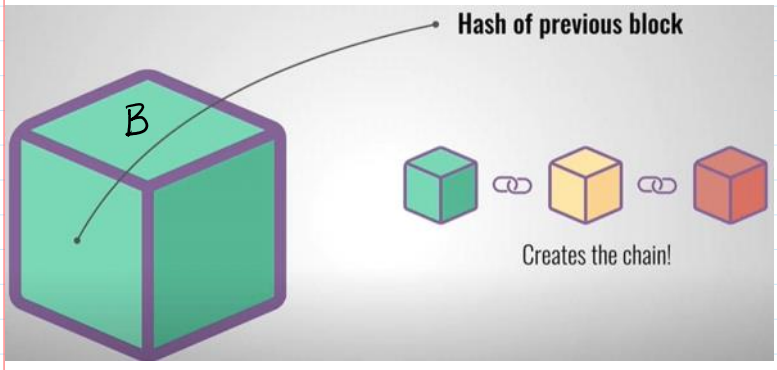


$H(B) = h$; $|h| = 256$ bit

$|B| \sim 1$ GB

Finger print

H-function; Message digest



$h \sim 2^{256}$

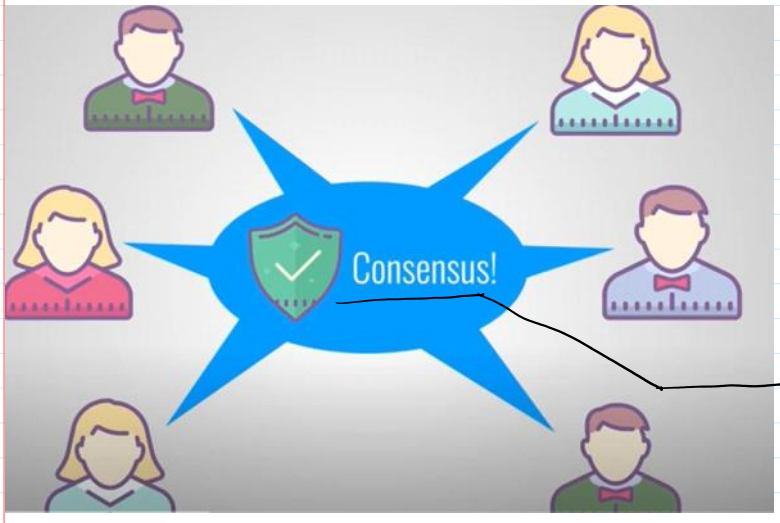
$1K = 2^{10} = 1024$

$1M = 2^{20}$

$1G = 2^{30}$

$1T = 2^{40}$

$P \sim 2^{2048}$



PoW - Proof-of-Work → Mining

Inventing (reward)

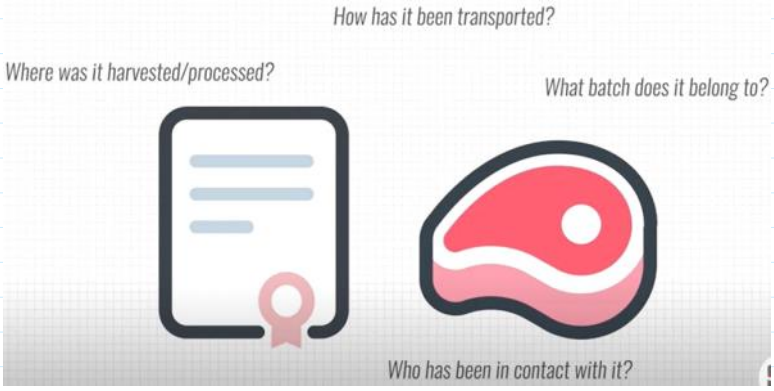
1. To define a rules of block acceptance.
2. To achieve the consensus of block validation in the net.

$1 Sat = 10^{-8}$ BTC

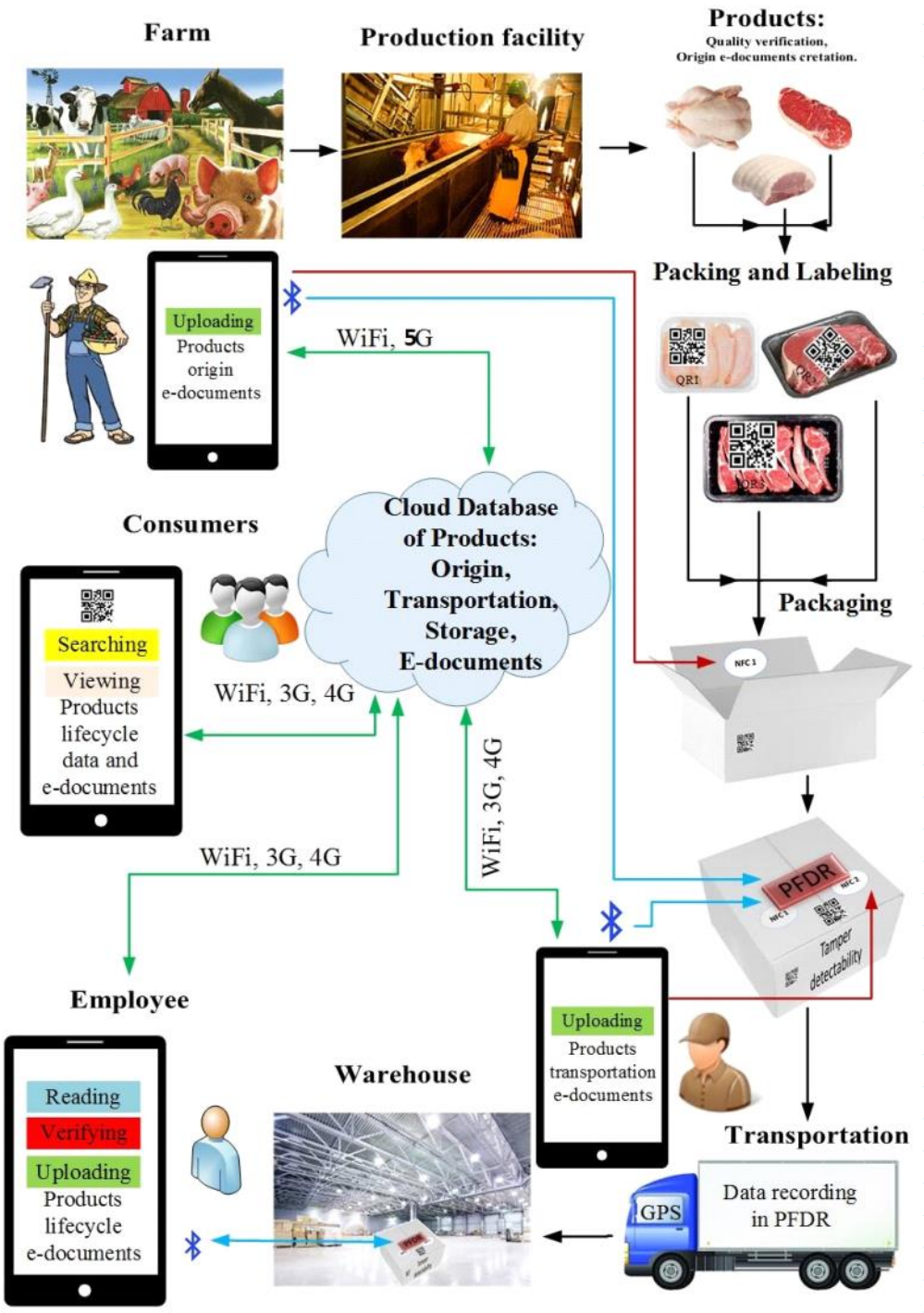
$1 BTC = 100\,000\,000$ Sat

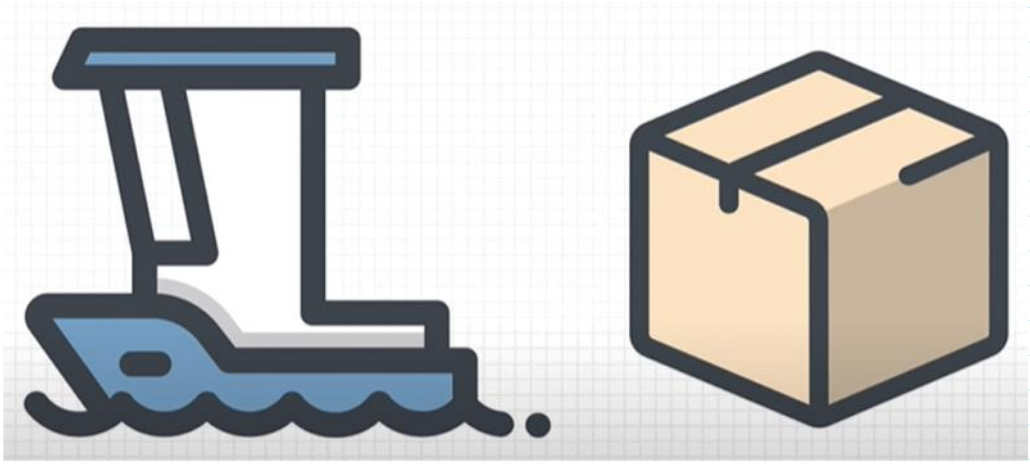
$1\,Sat = 10^{-8}\,BTC$

$1\,BTC = 100\,000\,000\,Sat$

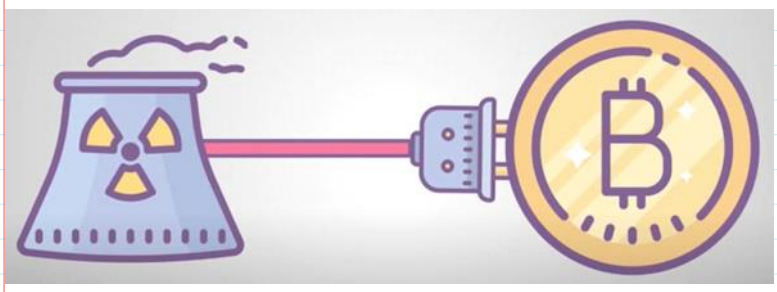


H2020





Containers: **IBM** and containers shipping giant **Maersk Group**.
Maersk Group is No 1 in the top 10 transport companies.



PoW - Proof of Work

Electric energy consumption kWh

1 kWh ~ 0.13 Eur.

54 TWh = $54 \cdot 10^9$ kWh

1 TWh = 10^{12} Wh

Application Specific Intrgrated Circuits - ASIC --> mining

Farm is using a huge el. (EP) power

[W] - watt

In 1 household EP ~ 5 kW

During 1 hour Energy = 5 kWh

↓

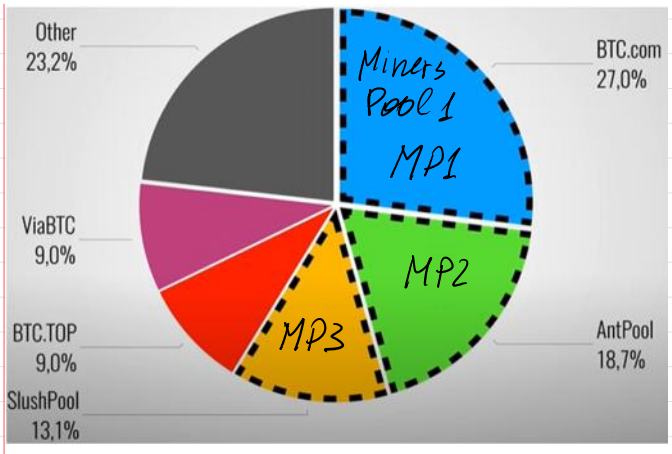
0,65 €

To charge e-vechile 20 - 50 kW

Farm can consume ~ 500 kW - 1 MW

During 1 hour you'll consume Energy = 1 MWh = 1000 kWh

1000 kWh * 0,13 € = 130 €

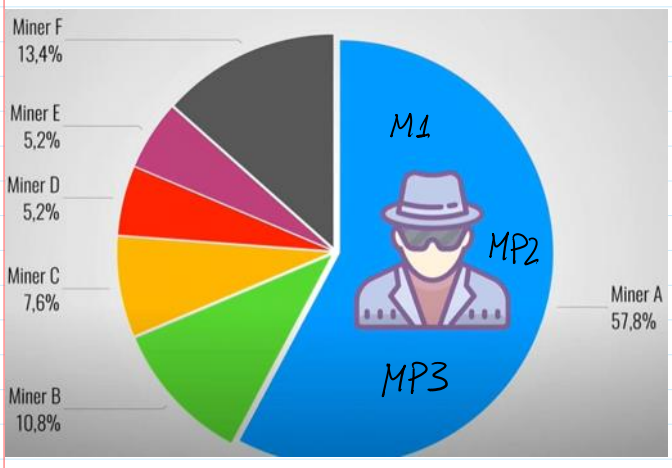


51% Attack

Computation power of mining related to the speed of h-values computation $V_h \sim$ THash/sec

E.g. $V_h = 1000$ THash/sec

Total network is has $V_h = 1900$ TH/s



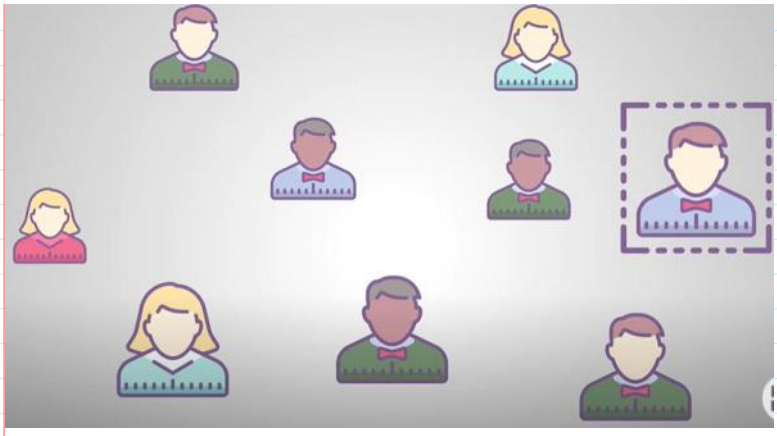
> 51% Network power

1000 TH/s is more then 51% 1900 TH/s

51% Attack

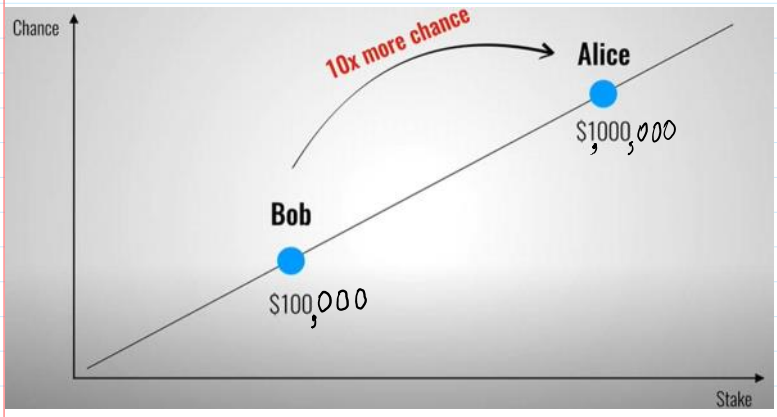
Ethereum ↓ 1 Eth ~ 2300 $

The name of cryptocurrency in Ethereum blockchain is named as Ether – Eth



Eth → 32 Eth put into the shell to make a right to mine a block

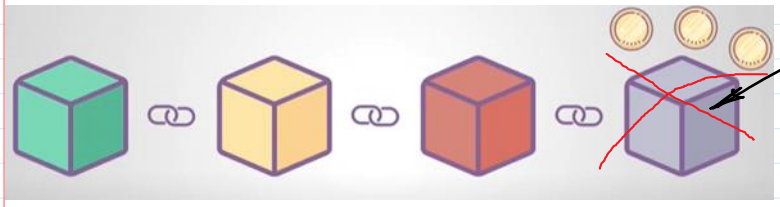
The difficulty of validat. is low → → the speed of validation is increased.



1 Wei = 10^{-18} Eth

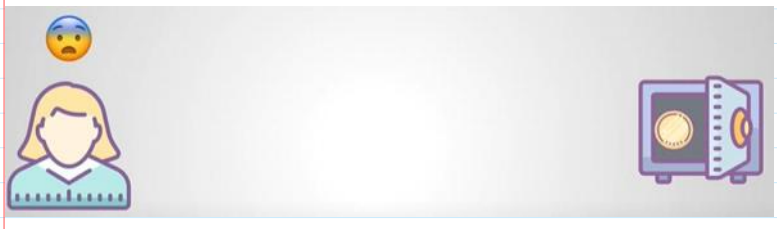
1 Eth = 1000 000 000 000 000 000 Wei

To mine a block consisting of a lot of transactions → → every transaction has declared a reward in Gas for its validat.



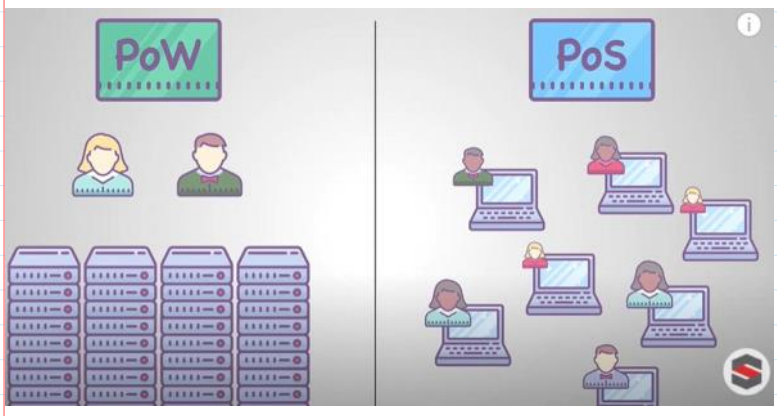
Mistaken validated block

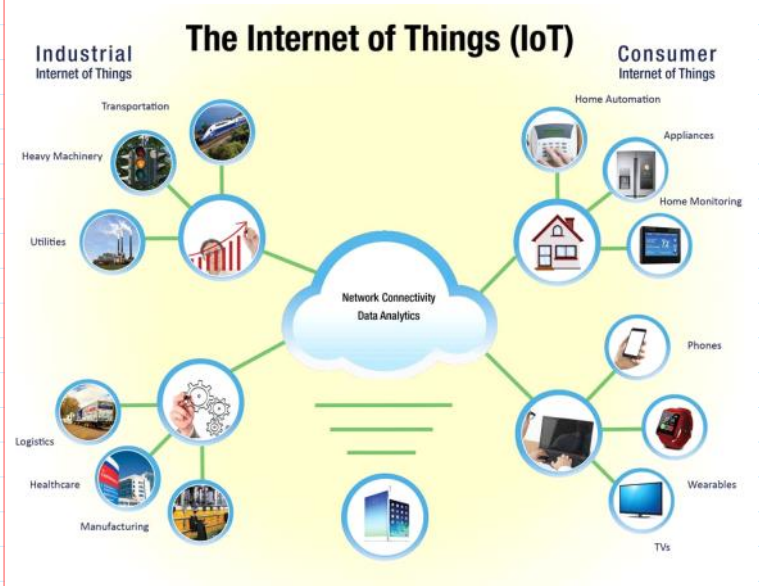
Intentionally Non-Intentionally



To empty your deposit after some time.

To empty your deposit after some time.



Ethereum 2.0
32 Eth; 1 Eth ~ 140 $

Ethereum, Libra, ... etc.