DISCLAIMER - WE BOUGHT BITCOIN WHEN IT WAS US$10
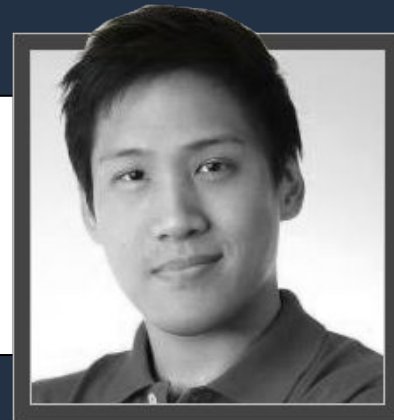
ONLY MSC BLOCKCHAIN COMPANY

SUPPORTED BY MDEC & MOF

Mark Smalley - CEO

Living in Malaysia for the past 20 Years
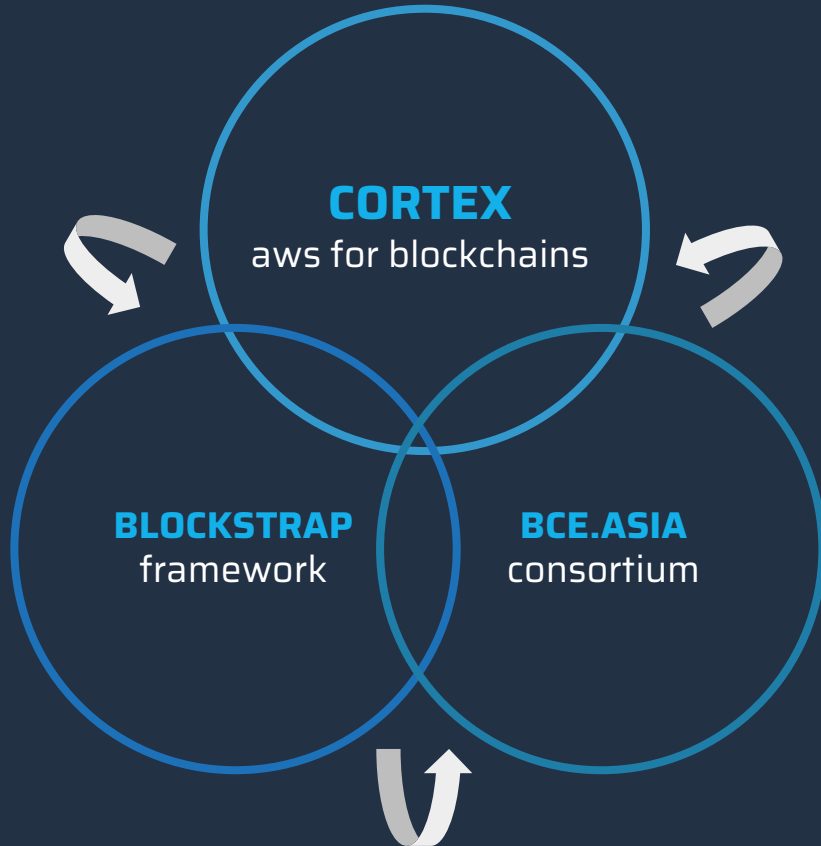
Building FinTech Applications for 15 Years

Building Blockchain Apps for 5 Years

Ruben Tan - CTO

Building Web Applications for 10 Years

Early Developer at MyTeksi and OnApp

Studying Distributed Consensus for 5 Years

INTRODUCING NEUROWARE

CORTEX
aws for blockchains

BLOCKSTRAP
framework

BCE.ASIA
consortium

GLOBAL FUNDING

Only Malaysian company to graduate from 500 Startups Accelerator in Silicon Valley, with funding from Coinsilium too

BUSINESS FOCUS

With DBS, Axiata, Maybank and Securities Commission as clients, we cover a broad spectrum of industries

FULL-STACK SERVICES

We provide corporate blockchain training and workshops along with consulting on solutions utilizing Cortex

BLOCKCHAIN TECHNOLOGY IS COMPLICATED

Blockchains

difficult to choose between a thousand chains with hundreds of different consensus methods and protocols

Massive Data Sets

TeraBytes of data with billions of records requires a lot technical resources, talent and time

Disrupting Businesses

Current tools & services designed for individuals and developers; to replace businesses

Financial Focus

Although crypto-currencies now account for over US$140 billion, they are merely the fuel for data storage

WE SIMPLIFY THINGS

Cortex

we've used decades of distributed ledger developer experience to build a platform that supports the best of the blockchains

Private APIs
We process multiple blockchains and provide dedicated APIs built for individual businesses

Enterprise Solutions
Our products and services have specifically been designed for organizations and businesses

Agnostic Protocols
We have developed non-financial protocols for data and identity that work across multiple blockchains

foundations for a world without walls

Asia's only public blockchain consortium determined to cut through the techno-babble, delivering informed decisions built on collaboration and distributed governance

REQUEST MEMBERSHIP   REQUEST REPORTS

featured ambassadors

Maybank   LIMJOYAN&CO.   REDmoney   CapitalBay   iTrainAsia   RHB

ENOUGH ABOUT ME

# WHAT ARE DISTRIBUTED NETWORKS …?

THEY USED GROUP CONSENSUS - SAME AS BITCOIN

- Size wasn't everything

- The history of each stone determined its individual value

- Conducting transactions quite literally involved a song & dance

- This required the majority of people from the village to be present

SANTANDER BANK - 1st TO ADMIT US$20B ANNUAL SAVINGS

Centralised Ledger

Distributed Ledger
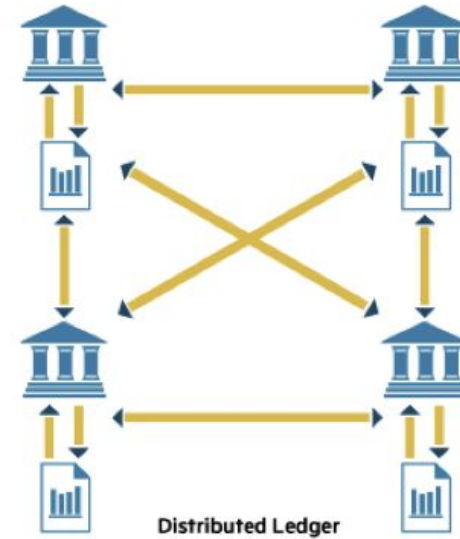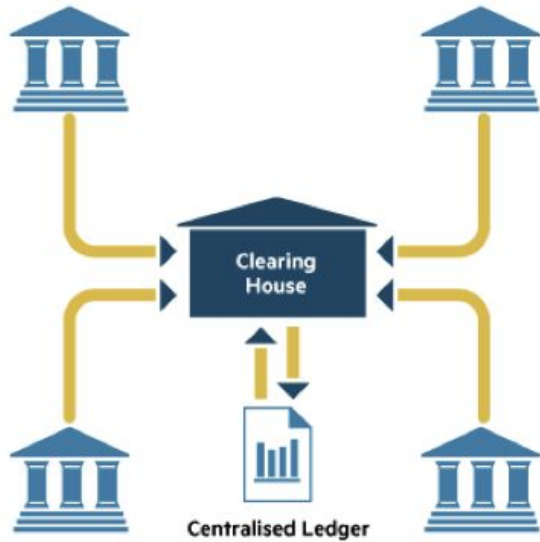
- ◉ Reconciling Multiple Central Ledgers Vs Auto-Audited Distributed Ledgers?
- ◉ Batch Processing CSVs every 24 Hours Vs Really Real-Time Settlement?

BITCOIN
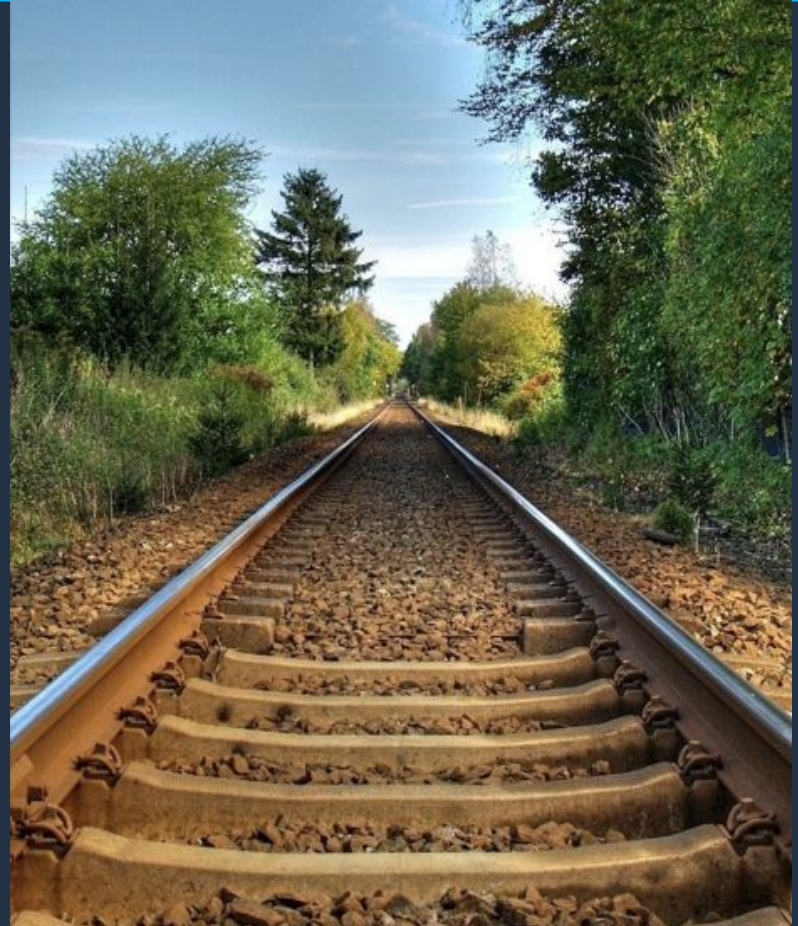(the first application / popular digital asset)

BLOCKCHAINS
(underlying tech / shared public ledger)

VS

ETHEREUM
(open network for building anything)

PRIVATE NETWORKS
(very similar to traditional database)

VS

PUBLIC BLOCKCHAINS
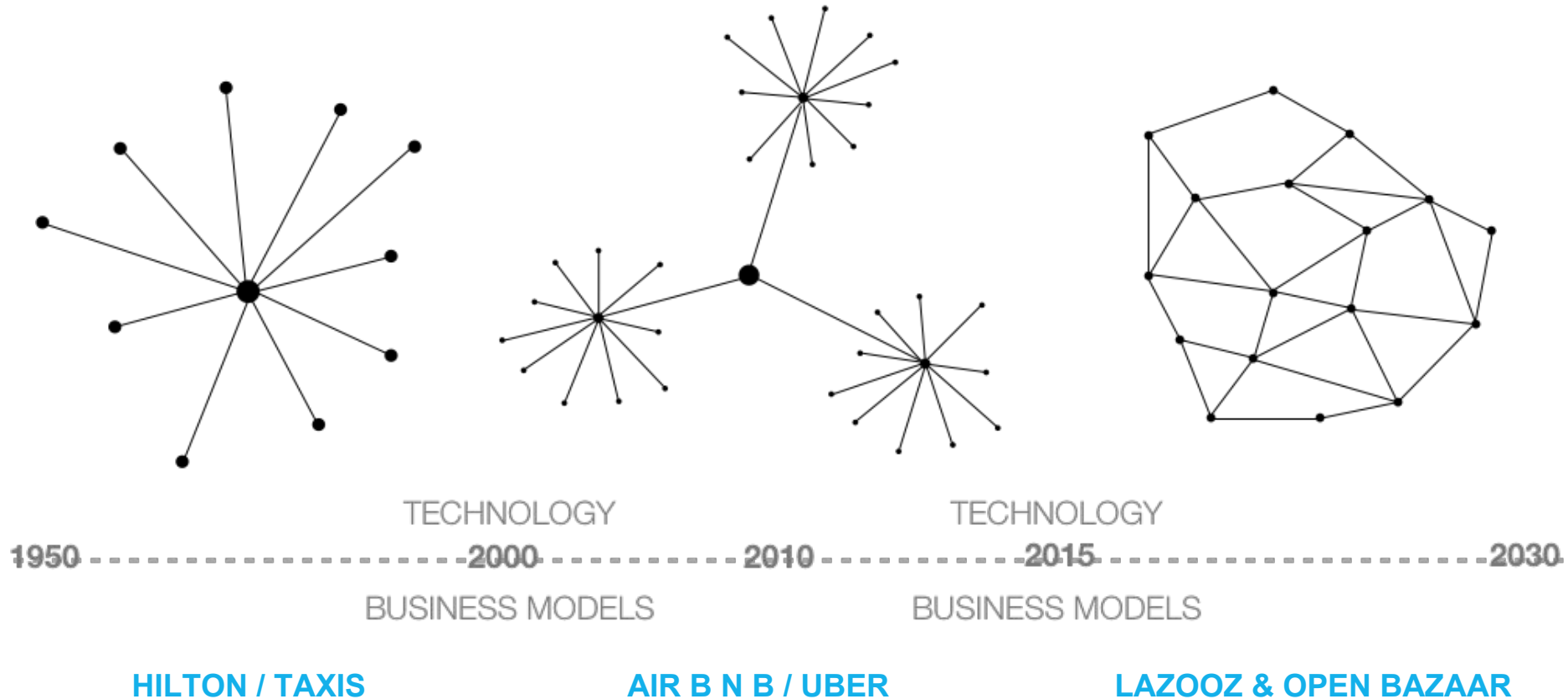(enables permissionless innovation)

PERMISSIONED LEDGERS
(puts new central controllers into authority)

VS

IT'S ALL A QUESTION OF CONSENSUS - AND ENERGY ...?

AN EVOLUTION BEYOND JUST NETWORK TOPOLOGIES

TECHNOLOGY

1950 ---- 2000 ---- 2010 ---- 2015 ---- 2030

BUSINESS MODELS

HILTON / TAXIS   **AIR B N B / UBER**   **LAZOOZ & OPEN BAZAAR**

BLOCKCHAIN BASED ENERGY MARKETS

BENEFITS OF A BLOCKCHAIN BASED ENERGY NETWORK

Improving the quality of life for everyone whilst saving costs:

- **SMART METERS** - moving beyond insecure connected cloud devices
- **SMART GRIDS** - store, trade and track energy distribution and transactions
- **SMART CITIES** - introduce new automated services and business models

Improving businesses whilst introducing new revenue streams:

- **SMARTER RELATIONSHIPS** - securely share data between trusted parties
- **SMARTER COMPLIANCE** - automate regulation with coded contracts
- **SMARTER DECISIONS** - network analytics with tamper proof audit trails

SECURELY EMPOWERING OPEN INNOVATION
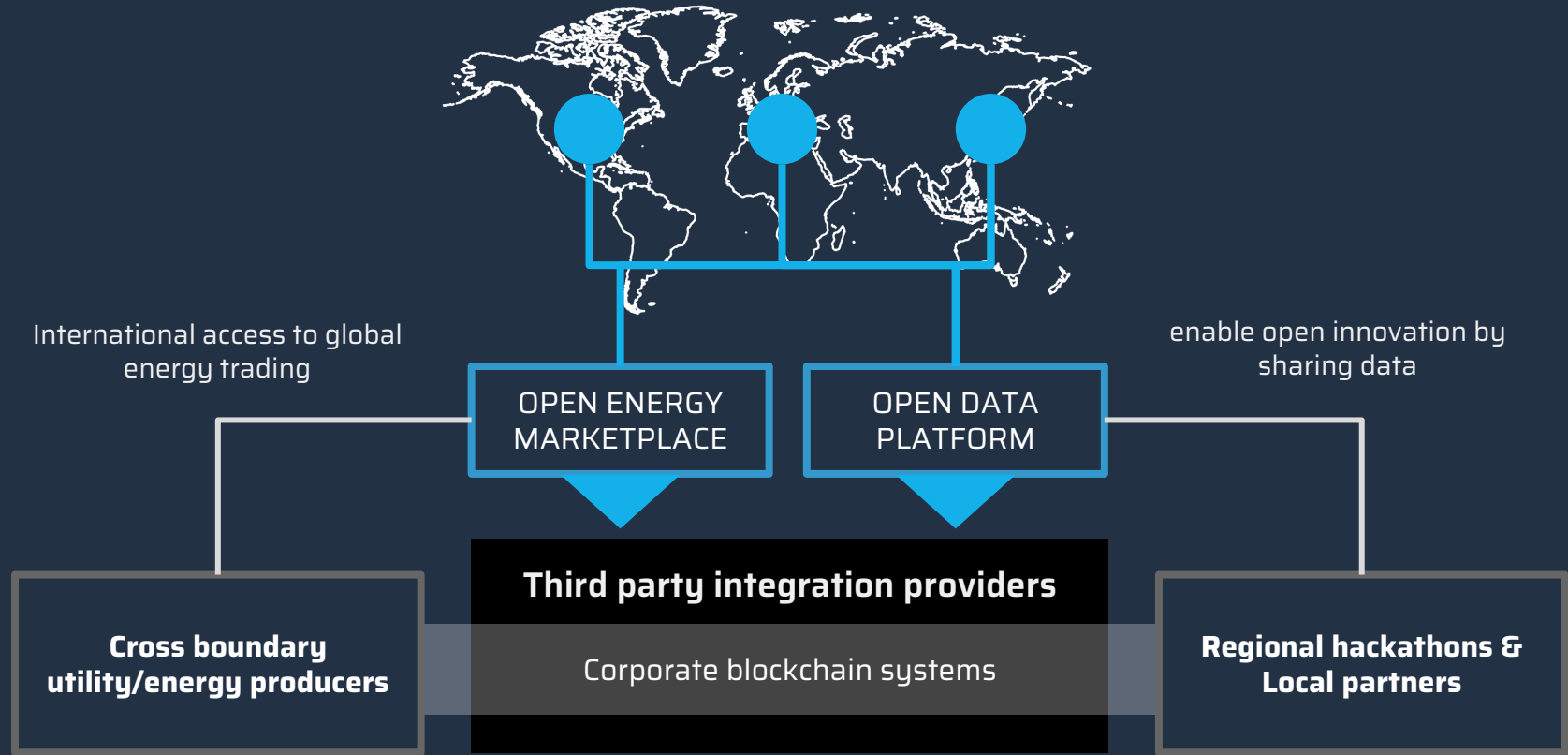
access public data and privately share sensitive information

private information

corporate

non-profits

researchers

regulators

automated accounting

Smart Meter

SMART ENERGY MARKET PLACE

Blockchain Based

OPEN & ACCESSIBLE DATA

public and permission-based information

Energy producer

provenance

reports

contracts

products and services built upon open data

FOUNDATIONS FOR A GLOBAL ENERGY MARKETPLACE

International access to global energy trading

enable open innovation by sharing data

OPEN ENERGY MARKETPLACE

OPEN DATA PLATFORM

Third party integration providers

Corporate blockchain systems

Cross boundary utility/energy producers

Regional hackathons & Local partners

HYPERLOCAL MARKETPLACES

CURRENT PROBLEMS

Limited choice of power providers	**Grids**
Difficult to track usage beyond transit	

FACILITATOR

Trust

Limited choice of power types	**Consumers**
Difficult to save from wasted energy	

MONEY

Friction

Limited choice of power users	**Prosumers**
Difficult to trade beyond locality	
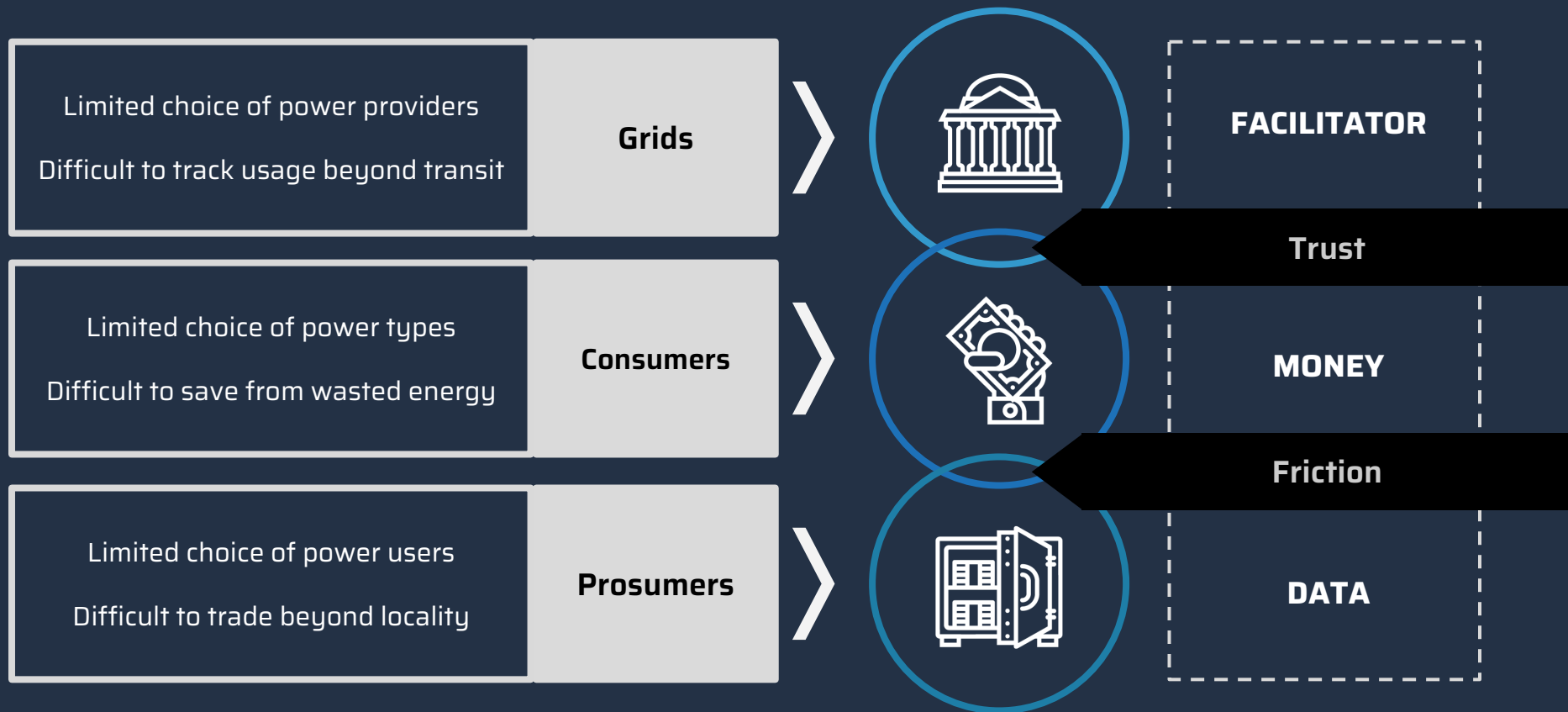
DATA

BLOCKCHAINS SOLVES INDIVIDUAL & GROUP PROBLEMS

GRID

CONSUMER

PROSUMER
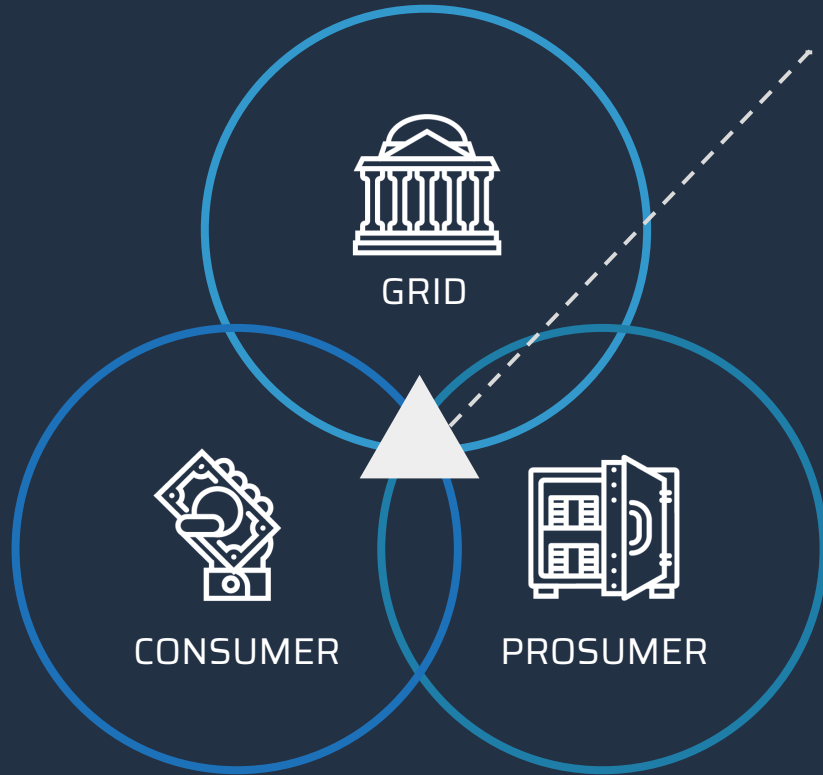
Automated Secondary Markets

1 Real-time analytics and automated reporting with an inescapable audit trail of everything
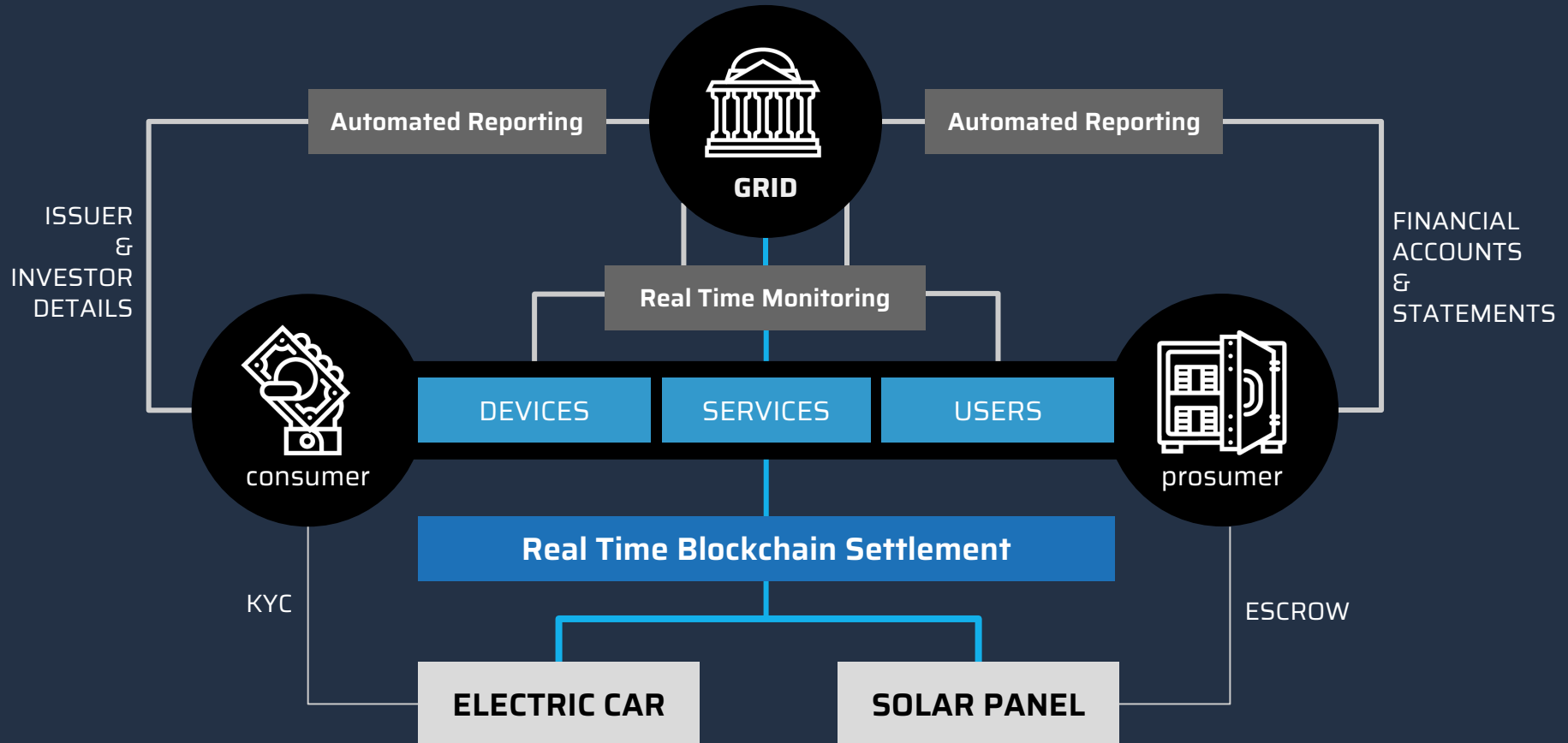
2 Single distributed tamper-proof database securely sharing data with all parties

3 Smart-contract enabled transactions reduce friction, costs and delays in settlement

HYPERLOCAL DISTRIBUTED UTILITY MARKETPLACE

STEP 3

UTILITIES AS A CURRENCY

CAN BANKS BE RE-CREATED WITH JUST TECHNOLOGY ?

◉ Banks traditionally play three fundamental roles:

  ○ STORE DEPOSITS (can now be done with any e-Wallet)

  ○ MAKE PAYMENTS (can now be done with crypto-currency)

  ○ PROVIDE CREDIT (can now be done by P2P operators)

◉ Perhaps more importantly, banks are also the custodians of trust:

  ○ TRUSTEE SERVICES (trust can now be provided by blockchains)

  ○ ESCROW PAYMENTS (can now be programmed with multi-sig addresses)

  ○ LETTERS OF GUARANTEE (can now be issued with smart contracts)

CORTEX WAS DESIGNED TO DO JUST THAT

Applications

KEEP	PASSPORT	INTEGRITY	GUILD
Enterprise Wallets	Keys & Identity	Data & Notarisation	POS & Tokens

Public Key Broadcasting
Key Abstraction / Revocation

DN-KEY

CRYPT

Private Key Management
Multi Signature Signing

API

Blockchains & Distributed Protocols

BLOCKAUTH   EVERSTORE   BABEL

HOW IT ALL FITS TOGETHER

NRG TRUST - TRUSTEES

Foundation required for all energy projects

- Multi-Signature Accounts
- Smart Contract Fulfillment
- Tokenization of Assets
- Tokenization of Ownership

NRG CHANGE - EXCHANGE

Services available to energy providers

- Exchange Trustee Tokens for Utility Tokens
- Allow for vetted Utility Service Relationships
- Broker Energy Transfers

NRG VAULT - E-WALLET CONNECTING TRUSTEES WITH EXCHANGES FOR ANY SERVICE

neuroware

email the team anytime - founders@neuroware.io