The background features a faded aerial photograph of a seaplane on a body of water. The image is framed by vibrant, flowing wavy borders in shades of red, orange, and yellow. The text is centered and reads:

INDUSTRY 4.0
AND BLOCKCHAIN
TECHNOLOGY
STAGES

Elmar Malikov



- Founder Nirvaana Club
- CEO Elmar Malikov Company
- Business, start-up, STO, IEO adviser and coach
- Extensive experience in founding and developing start-ups
- Background in Finance, Economics, International Relations, Coaching, Neurolinguistics, Management
- Industries have been involved include Telco, Fintech, Travel, MICE, Amusement parks, FMCG

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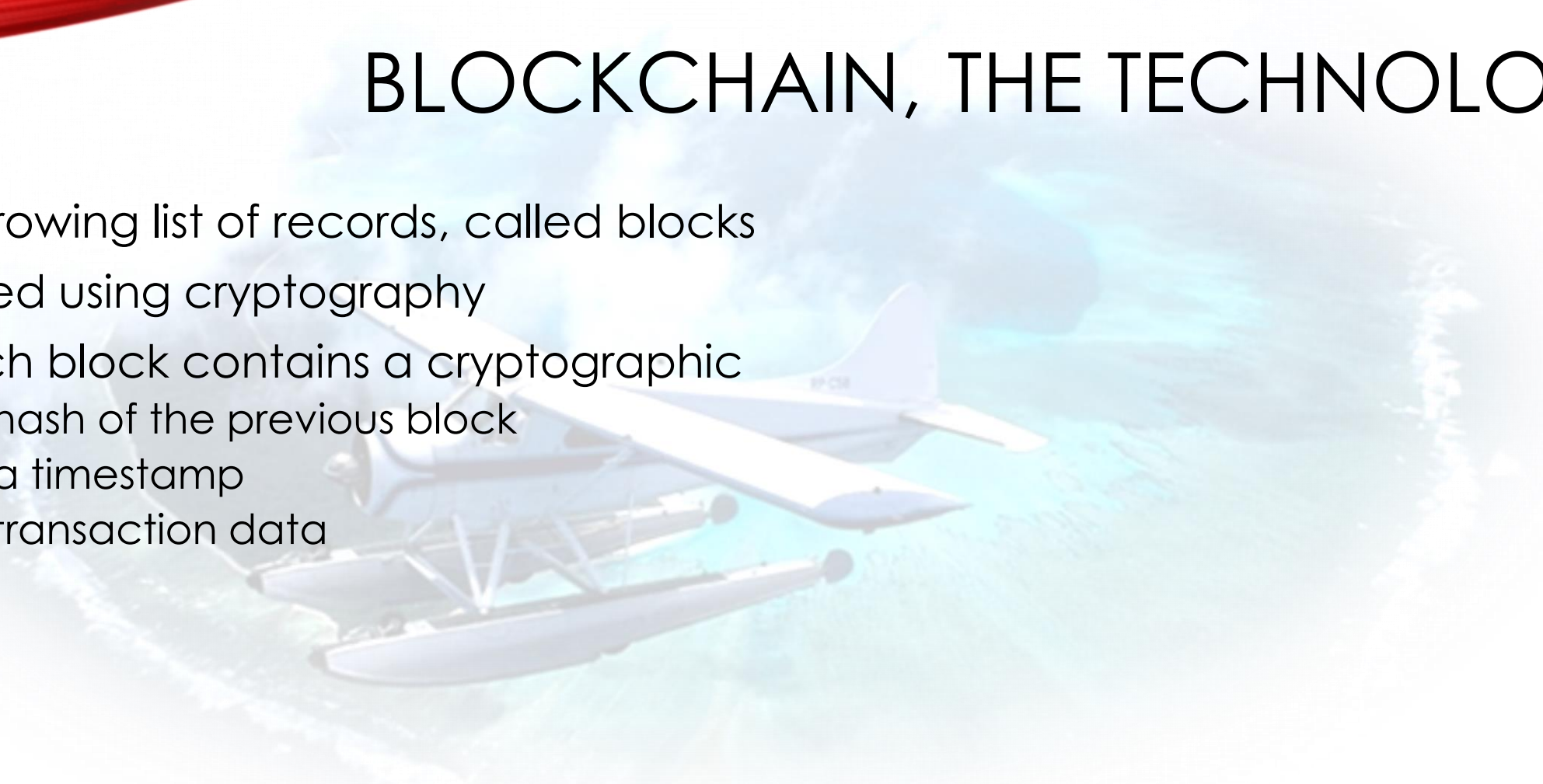
BLOCKCHAIN DEVELOPMENT

- New type of data base technology
- Bitcoin
- Other cryptocurrencies
- Smart contract
- Derived cryptocurrencies
- AI integration



BLOCKCHAIN, THE TECHNOLOGY

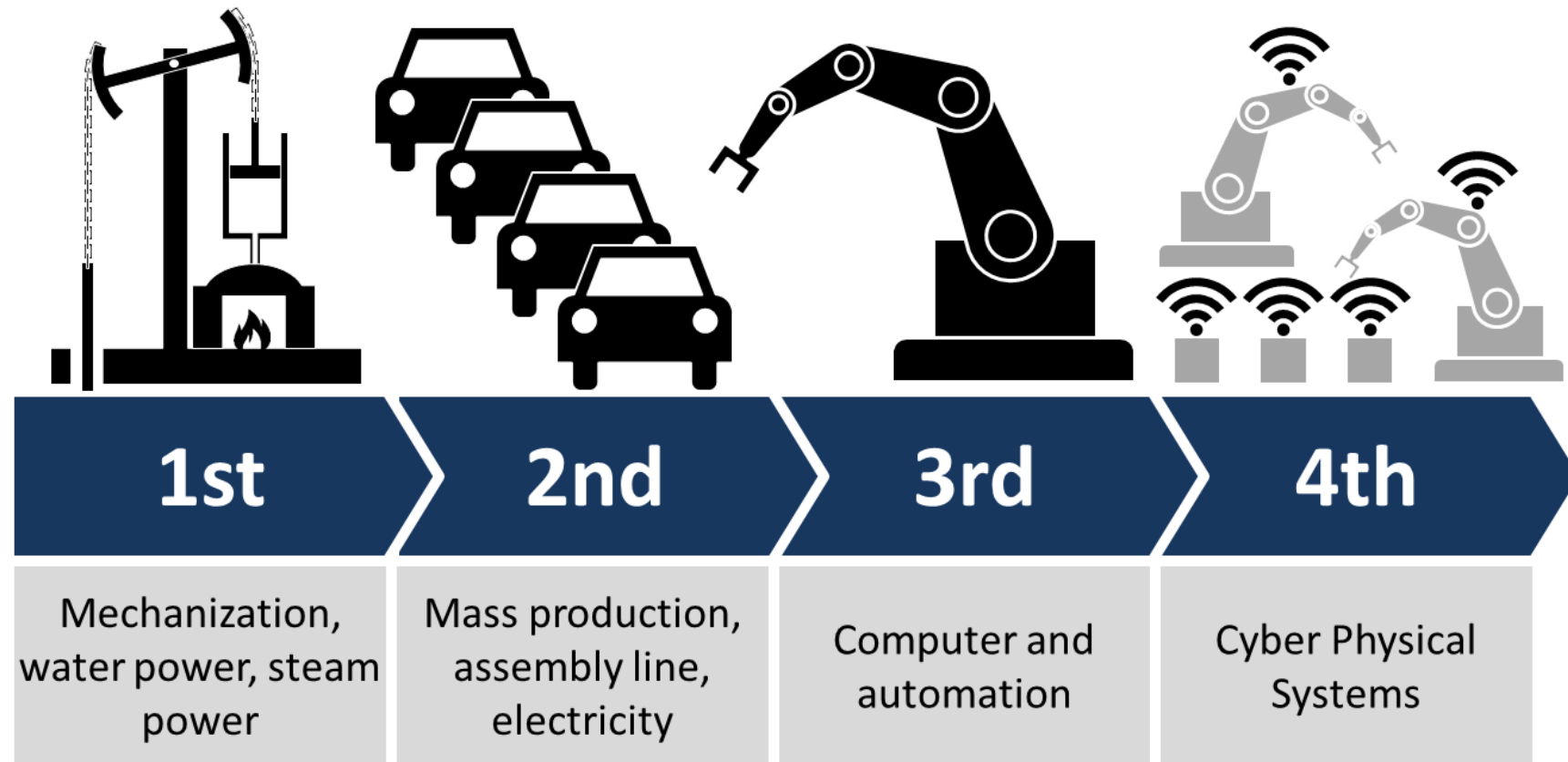
- a growing list of records, called blocks
- linked using cryptography
- each block contains a cryptographic
 - hash of the previous block
 - a timestamp
 - transaction data



BLOCKCHAIN – WHAT THIS IS ABOUT

- resistant to modification of the data
- an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way
- a peer-to-peer network collectively adhering to a protocol for inter-node communication and validating new blocks
- once recorded, the data in any given block cannot be altered retroactively without alteration of all subsequent blocks, which requires consensus of the network majority
- distributed computing system with high Byzantine fault tolerance

INDUSTRY DEVELOPMENT STAGES



4.0 HIGHLIGHTS

- Industry 4.0 is a name given to the current trend of automation and data exchange in manufacturing technologies.
- It includes
 - cyber-physical systems
 - the Internet of things
 - cloud computing
 - cognitive computing

Industry 4.0 is commonly referred to as the fourth industrial revolution

I4 DESIGN PRINCIPLES

- **Interconnection:** The ability of machines, devices, sensors, and people to connect and communicate with each other via the Internet of Things (IoT) or the Internet of People (IoP)
- **Information transparency:** The transparency afforded by Industry 4.0 technology provides operators with vast amounts of useful information needed to make appropriate decisions. Inter-connectivity allows operators to collect immense amounts of data and information from all points in the manufacturing process, thus aiding functionality and identifying key areas that can benefit from innovation and improvement
- **Technical assistance:** First, the ability of assistance systems to support humans by aggregating and visualizing information comprehensively for making informed decisions and solving urgent problems on short notice. Second, the ability of cyber physical systems to physically support humans by conducting a range of tasks that are unpleasant, too exhausting, or unsafe for their human co-workers
- **Decentralized decisions:** The ability of cyber physical systems to make decisions on their own and to perform their tasks as autonomously as possible. Only in the case of exceptions, interferences, or conflicting goals, are tasks delegated to a higher level

I 4.0, INDONESIA SPECIFIC

- Fire fighting
- Mining
- Agriculture
- Transport
- Construction
- Cleaning
- Emergency



CASES – CANTAKA-STRAUS

- Unmanned fully automated transportation
- Devices (vehicles) communicate with each other, make decisions
- Alarm system fully automated
- Emergency actions fully automated



CASES – CLENOID

- Skyscraper facade cleaning robots
- Zero Human risks
- Partially automated



CASES – AUTO-PILOT HELICOPTERS

- Totally automated piloting
- 250 km per hour speed
- 250 kg of load
- A95 petrol
- Easy maintenance



BLOCKCHAIN APPLICATIONS

- Payment
- Medicine
- Voting
- Financial reporting
- Marketing and advertising
- Logistics



INDUSTRY 4.0 AND BLOCKCHAIN

- Transparency – this is one of the core advantages of blockchain
- Internet of things – mining, prove of transaction... - this is all already unmanned and automated
- Smart-contract - automate settling transactions
- Blockchain gives unprecedented protection of data from modification

BLOCKCHAIN APPLICATIONS. DIGITAL MONEY

- Speed of transaction
- Cost
- Intermediary
- Security
- Ease of storing
- Inflation

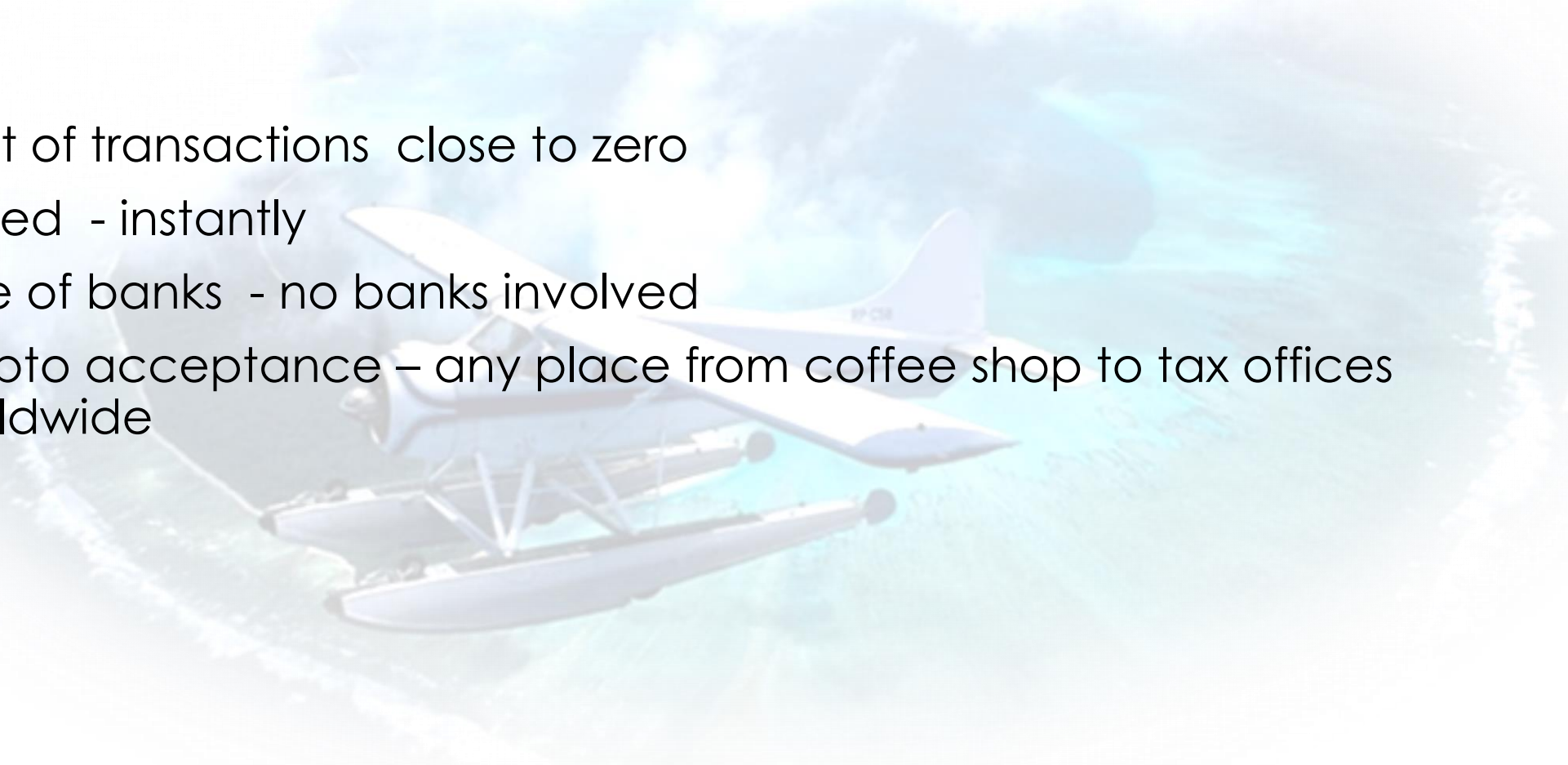


BLOCKCHAIN APPLICATIONS. VOTING

- Candidates track record on blockchain
 - Privately kept lifelong information about anybody
 - Temporary nodes created for each voting session, private gadgets involved
 - No results scamming
 - No candidates history scamming
- 
- A white seaplane is flying over a tropical island. The island features a lighthouse on a hill, palm trees, and a beach. The scene is set against a bright, hazy sky.

BLOCKCHAIN FUTURE. DIGITAL MONEY

- Cost of transactions close to zero
- Speed - instantly
- Role of banks - no banks involved
- Crypto acceptance – any place from coffee shop to tax offices worldwide



BLOCKCHAIN FUTURE. FUNDRAISING

- Verified data on business / start-up history
- Automated dividend distribution
- Automated verified business reports
- Security / equity tokens as shares
- Founder and key team players verified track record

BLOCKCHAIN

- Blockchain taken simple is just a database
- Encryption and decentralization make it secure and reliable
- Digital (crypto) currencies are probably the best application based on blockchain

CRYPTOCURRENCIES, TOKENS

Existing problems

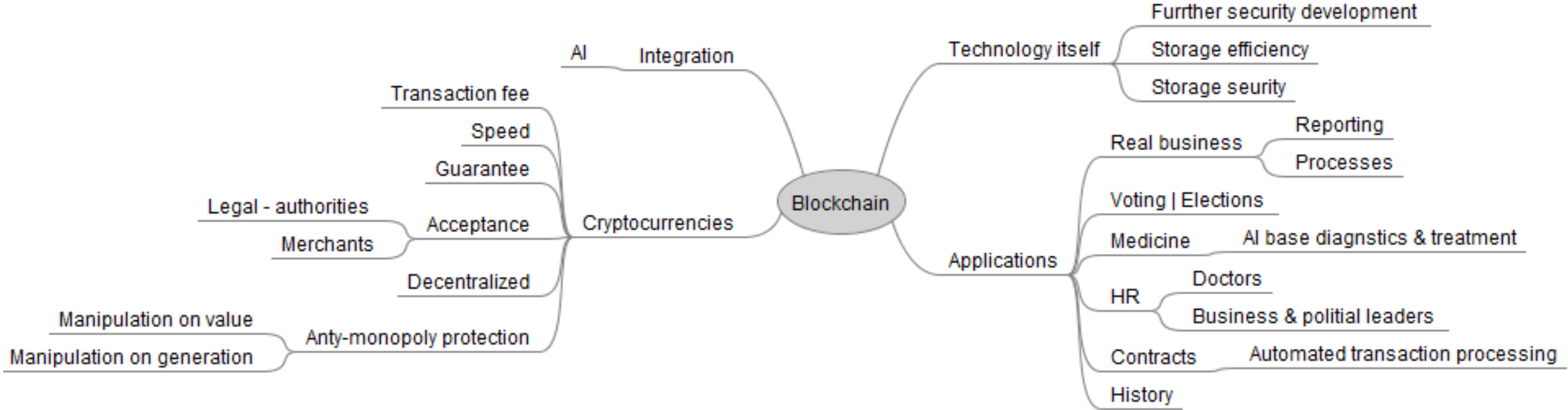
- No backing
- No purpose
- No value
- Trading
- Complicated storage
- Market making / price manipulation
- Centralized mining
- Centralized ownership

CRYPTOCURRENCIES, TOKENS

Solution

- Crypto currencies to be fully backed
- Storage / verifying better tools developed
- Integration into national economies developed – regulation, taxation
- Self regulation - un-backed, no purpose and value crypto currencies will just lose value and disappear

BLOCKCHAIN FUTURE





THANK YOU!

IT IS HAPPENING ANYWAY!

LETS BE A PART OF IT OR, BETTER, LEAD IT!

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