

# Blockchain and the Real Estate Life Cycle

Dipl.-Ing. Achim Jedelsky MBA

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# My Road to Blockchain

- Architect, project manager and MBA
- Since 2013 Head of Processes/IT at Daimler Real Estate
- 2016 winner of internal Daimler Innovation Award with Blockchain idea
- 2016 IBREA Meetups Berlin (Intern. Blockchain Real Estate Association)
- Meetup „Blockchain for Real Estate“ in Berlin with +780 members
- 2017 founding member of the German Blockchain Association

[achim@jedelsky.com](mailto:achim@jedelsky.com)  
@jedelsky  
+49 179 7648612

<https://www.meetup.com/de-DE/Blockchain-for-Real-Estate/>  
<http://www.ibtcrea.org/>  
<http://bundesblock.de/>

# Key Characteristic of Blockchain

Distributed Ledger → no ‚single-point-of-failure‘

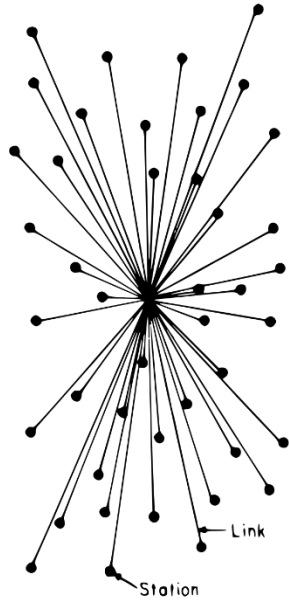
Immutable → trust-worthy source

Direct Transaction → no middle-man necessary

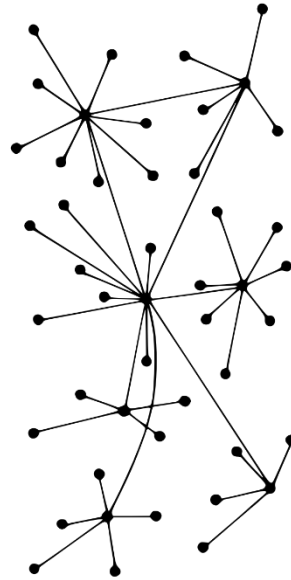
**Blockchain is not useful for everything, but offers completely new possibilities for dealing with digital values and processes → new business models**

## Key Characteristic of Blockchain

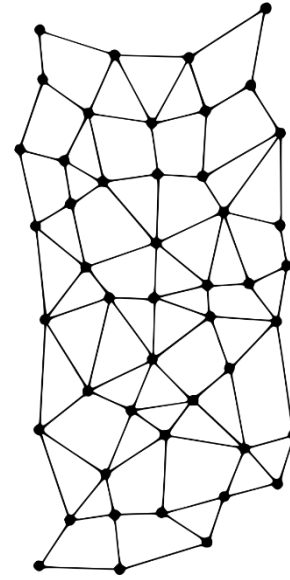
# Distributed Ledger



CENTRALIZED  
(A)



DECENTRALIZED  
(B)



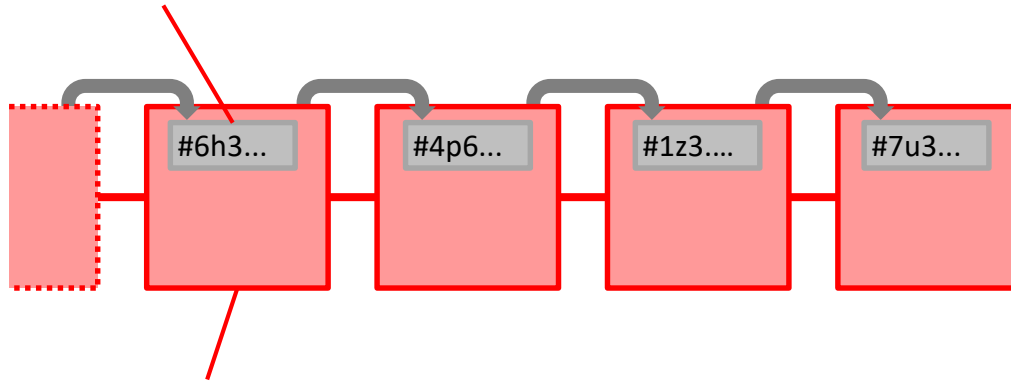
DISTRIBUTED  
(C)

**Comparison centralized, decentralised and distributed by Paul Baran, 1962**

## Key Characteristic of Blockchain

# Immutable

Cryptographic hash value of all prior blocks

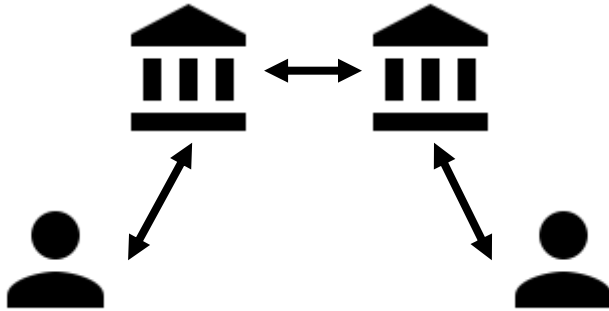


Block with data/transaction

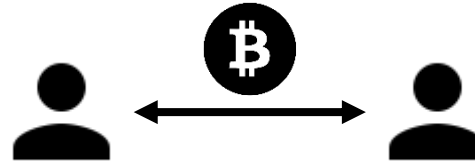
**If the data of only one block is changed, the hash value is changed as well and the tampered blockchain is detected as false by the network**

## Key Characteristic of Blockchain

# Direct Transaction



Transaction with middle man (bank)



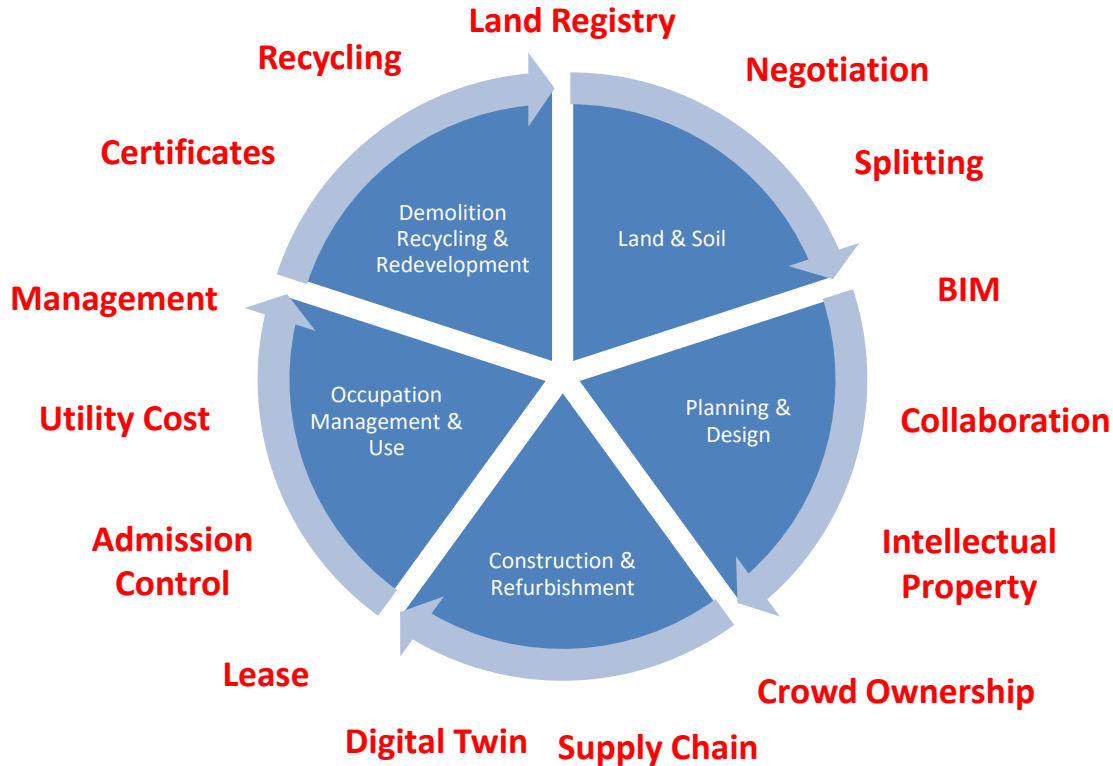
Transaction with bitcoin

**Blockchain technology replaces trust-giving middle man**

# Blockchain and the Real Estate Life Cycle

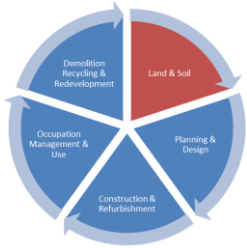
**...so where can I use Blockchain in Real Estate?**

# The Real Estate Life Cycle





# Land & Soil



Land Registry    Negotiation    Splitting



distributed ledger → no ‚single-point-of-failure‘

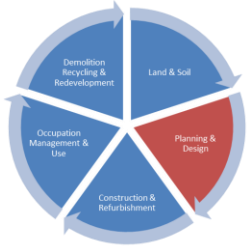
Immutable → secures ownership information



big effort → authorities need to be include

bad scalability → big national differences

# Planning & Design



BIM      Collaboration      Intellectual Property



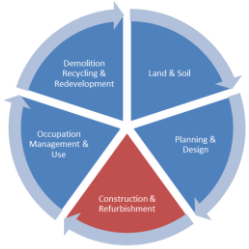
distributed ledger → supports collaboration

transparent → reliable data source



regulation → authorities need to be include

# Construction & Refurbishment



Crowd Ownership

Supply Chain

Digital Twin



tokenization

→ simple way to participate in real estate

transparent

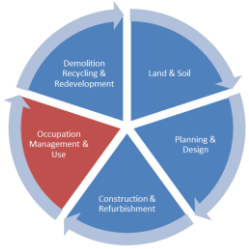
→ tracking of building material & information



regulation

→ need for clear guidelines and standards

# Occupation Management & Use



Management   Utility Cost   Admission Control   Lease



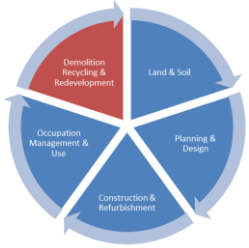
direct transaction → no need for middle men

transparent → tracking of cost & automation of payment



incumbents → threat to business models

# Demolition Recycling & Redevelopment



Recycling

Certificates



transparent

→ tracking material life cycle

distributed

→ information is not linked to only one entity



regulation

→ need for standards and long time solutions

# How to Innovate an Industry that is booming?

- Be honest: Blockchain is no solution
- Innovation is the key and blockchain just a part of it
- Free-to-Fail-Culture has to be embraced
- Convergence of today's innovation (AI, IoT, VR,...)
- Software-skills will be part of any job profile (like MS Office is today)
- Meetups vs. corporate training