

kadaster

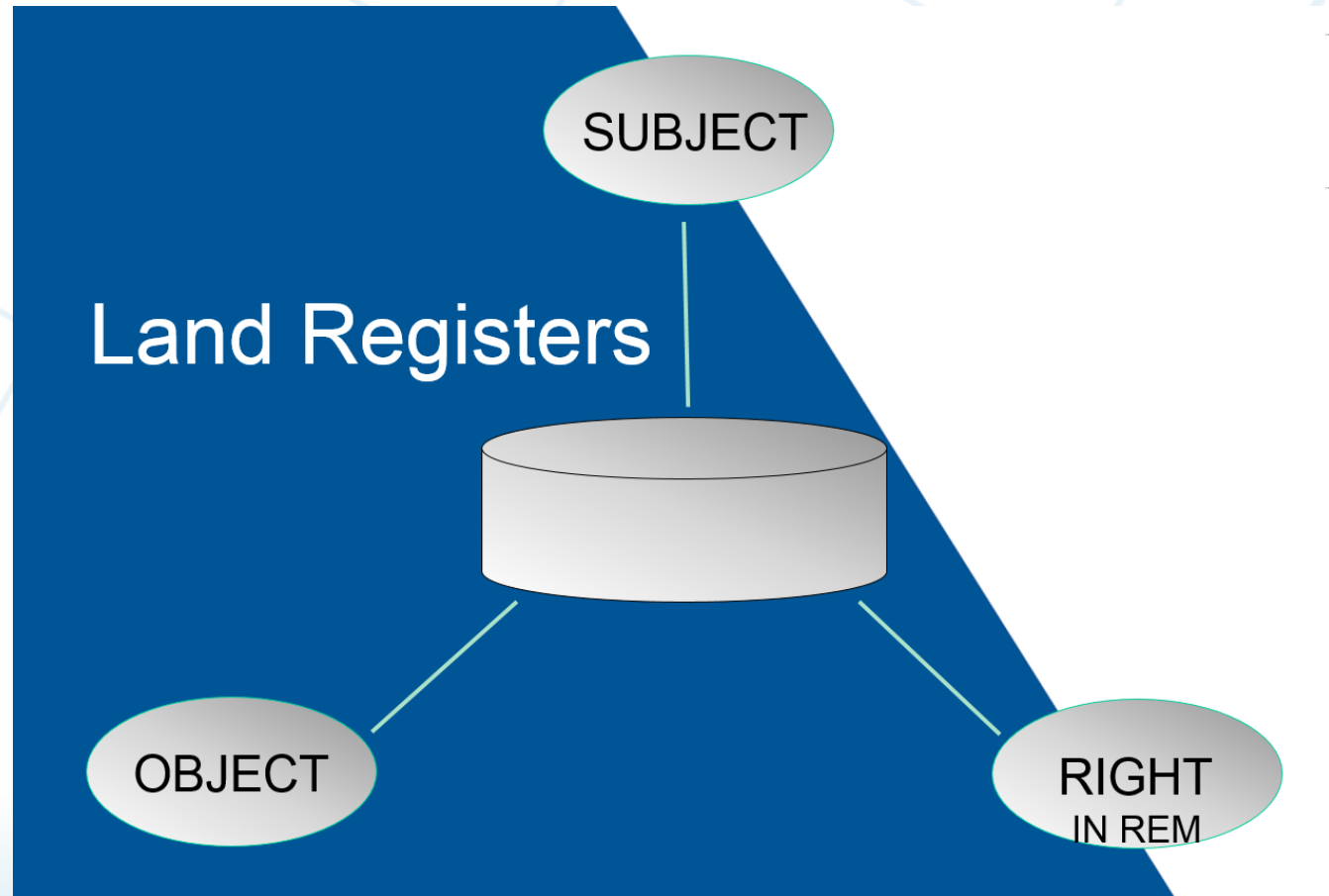


EMERGING TECHNOLOGIES

REPLACING LAND REGISTRIES?

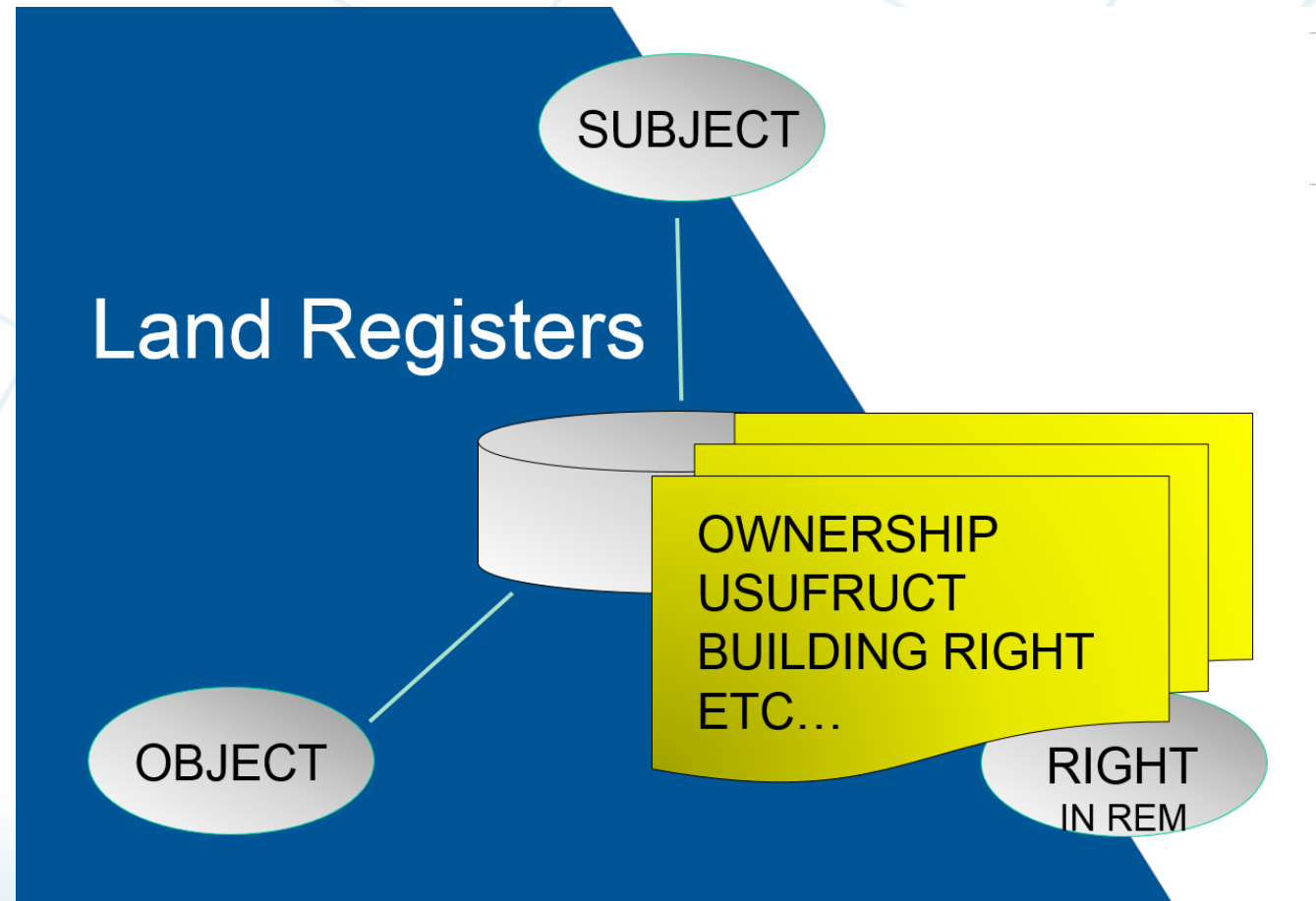
Jacques Vos, Kadaster
ELRA General Assembly XXVIII, 22-XI-2019, Rotterdam

REMEMBER THIS?



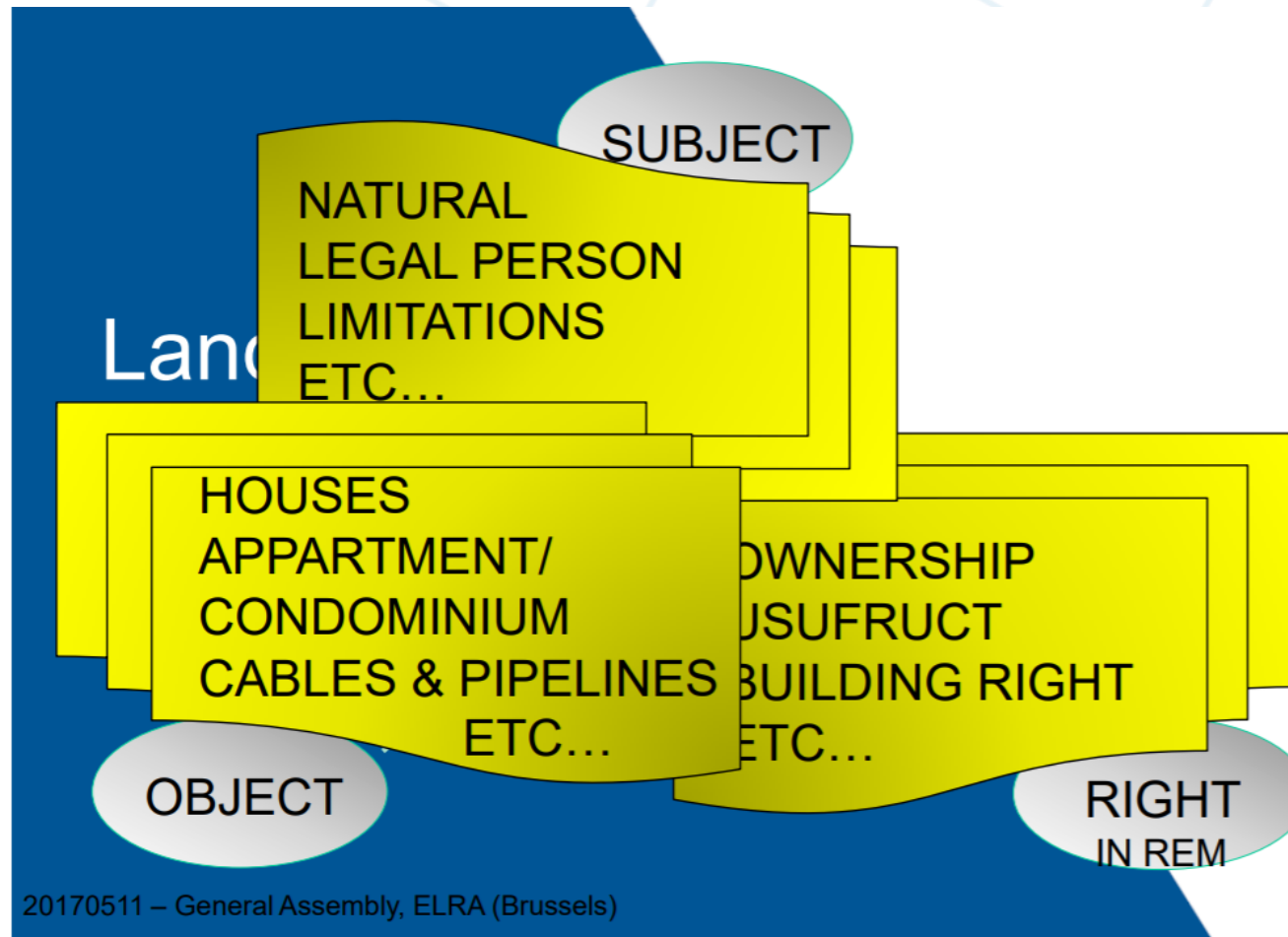
GENERAL ASSEMBLY

BRUSSELS 20171105



GENERAL ASSEMBLY

BRUSSELS 20171105 (2)



BLOCKCHAIN WILL BRING ...

- INFORMATION SYMMETRY
- IMMUTABILITY
- TRANSPARENCY

GENERAL ASSEMBLY

BRUSSELS 20171105 (4)

Blockchain (1)

ARCHIVE	Yes, hash/pointer
REGISTRATION	No, too complex
INFORMATION	No, data retrieval

20170511 – General Assembly, ELRA (Brussels)

Blockchain (2)

Genesis-block	Who? Quality- issue
Governance?	DAO, indemnity
Smart contracts	Code = law = code

20170511 – General Assembly, ELRA (Brussels)

Blockchain (3)

Vendor lock-in?	Who owns data
Bitcoin-based?	PoS & no PoW
Complete?	No, data retrieval

20170511 – General Assembly, ELRA (Brussels)

In Future?

VARIOUS INITIATIVES	Redundancy & privatization!
STANDARDIZATION	ISO/TC307, BIM, etc.
SMART CONTRACTS	Not all legal aspects

20170511 – General Assembly, ELRA (Brussels)

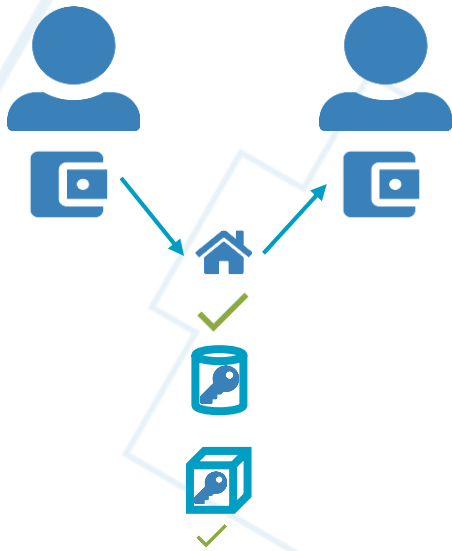
KEY QUESTIONS

GOVERNANCE → WHO IS IN CHARGE?

IT → DRIVER OR ENABLER?

SELF-SOVEREIGN IDENTITY OR PUBLIC INTEREST?

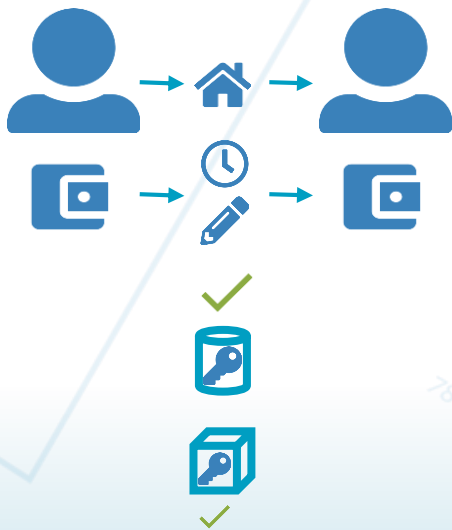
TRUST OR LEGAL CERTAINTY?



TWO FUNCTIONS OF BLOCKCHAIN

TOKENIZATION – TRANSFER OF VALUE

NOTARIZATION – AUDIT TRAIL



TOKENIZATION IN REAL ESTATE

UNIQUE DIGITAL TOKENS REPRESENTING VALUE

TOKEN MANAGEMENT

COMPLEXITY - subject, object, right in rem

WALLET OR IDENTITY

PHYSICAL, LEGAL OR ADMINISTRATIVE REALITY

RISK AND LIABILITY

TRUSTED THIRD PARTIES...

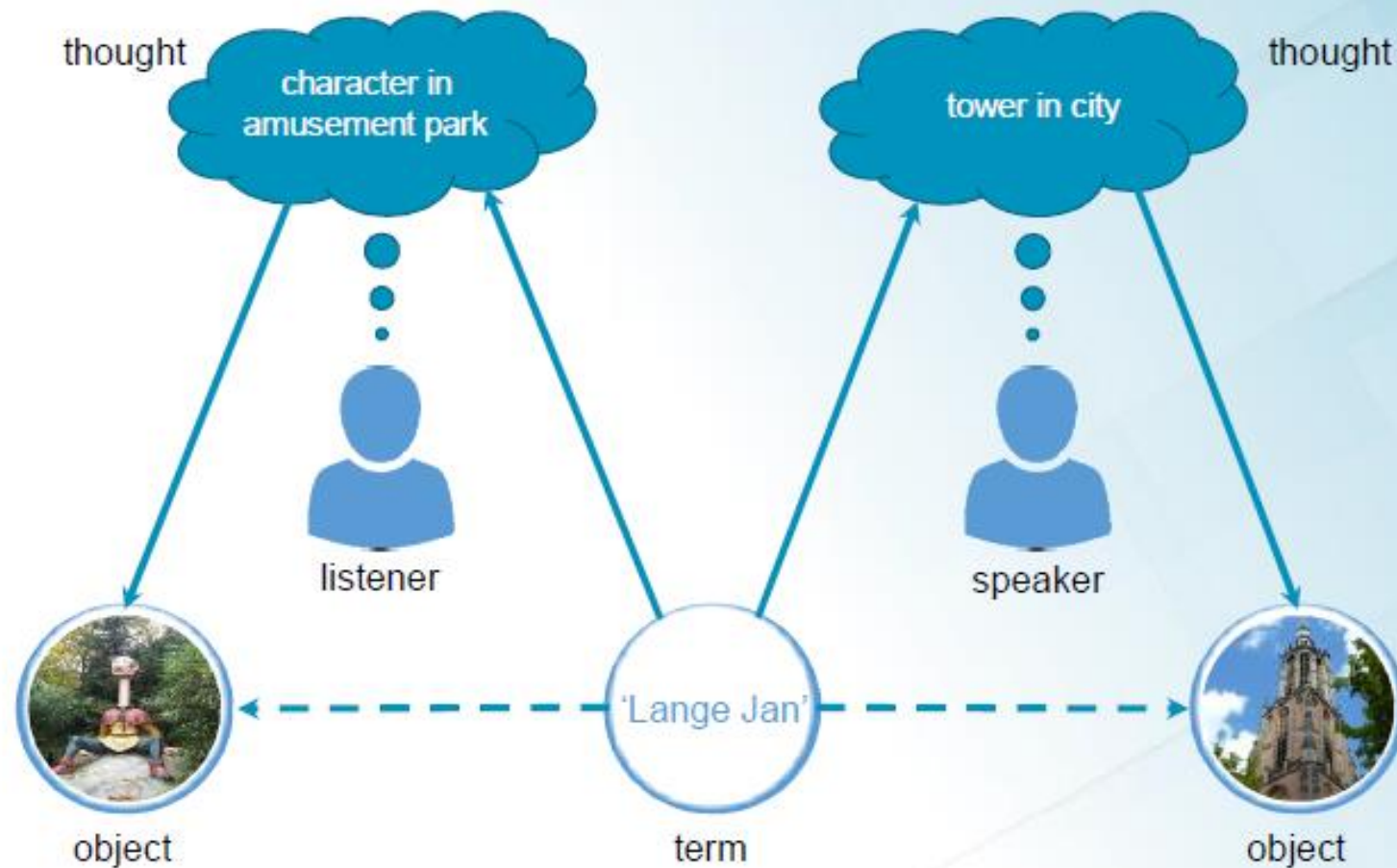
- VALIDATE TRANSACTIONS
- GUIDE A CERTAIN PROCES
- DRAFT CONTRACTS
- IDENTIFY OBJECTS & SUBJECTS
- ARE AN INDEPENDANT WITNESS
- PREVENT FRAUD

ELRN WORKSHOP TALLINN 20181601

‘BLOCKCHAIN WILL REPLACE HARDLY ANYBODY’

- BUT: CRITICAL VIEW ON OWN ORGANISATION & ROLE
- AND: CRITICAL VIEW ON THE WHOLE (REAL ESTATE) CHAIN
- AND: STANDARDISATION IN SCOPE
- DIFFFICULT:
‘ISLANDS’ (SECTORAL, NATIONAL & INTERNATIONAL)

ELRN WORKSHOP TALLINN 20181601 (2)



SO DATA MAY FIRST NEED TO GET....

ORGANISED

COMPROMISED

STANDARDISED

AUTOMISED

THE MEANING OF LAND REGISTRY DATA

- QUALITY
- OWNERSHIP
- USE

THE USE OF IT TO CREATE DATA



A. M. Turing (1950) Computing Machinery and Intelligence. *Mind* 49: 433-460.

COMPUTING MACHINERY AND INTELLIGENCE

By A. M. Turing

1. The Imitation Game

I propose to consider the question, "Can machines think?" This should begin with definitions of the meaning of the terms "machine" and "think." The definitions might be framed so as to reflect so far as possible the normal use of the words, but this attitude is dangerous. If the meaning of the words "machine" and "think" are to be found by examining how they are commonly used it is difficult to escape the conclusion that the meaning and the answer to the question, "Can machines think?" is to be sought in a statistical survey such as a Gallup poll. But this is absurd. Instead of attempting such a

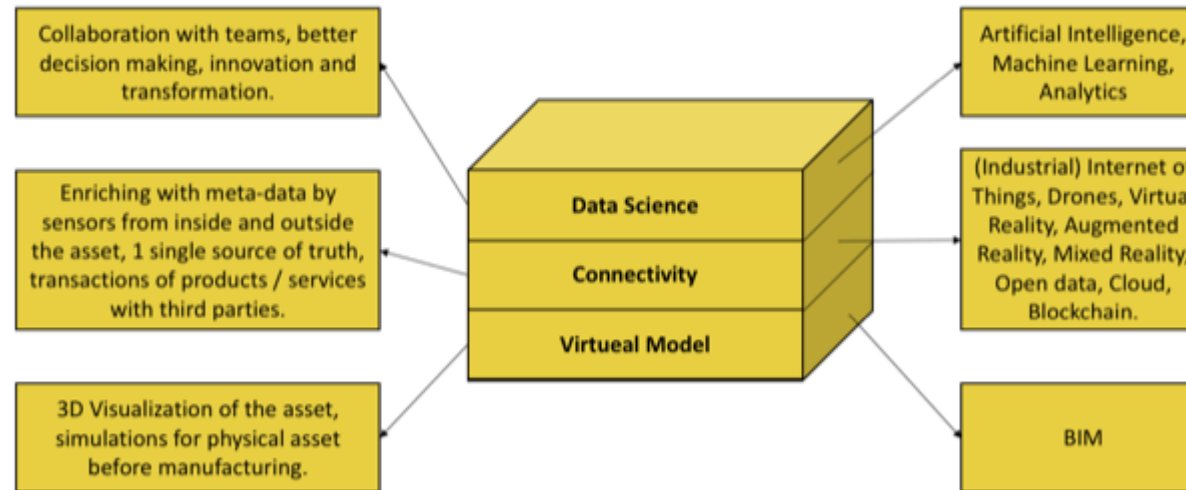
FLEXIBLE IT & ONTOLOGIES

- GOAL → A COMMON LANGUAGE
- DATA LANGUAGE / CONCEPTUAL SCHEME
- WITHIN A DOMAIN
- INTERNET (URI'S) → KNOWLEDGE GRAPH: ANSWERING QUESTIONS FROMS ALL AVAILABLE DATA FILES
- MOVING FROM DATA – INFO – KNOWLEDGE – WISDOM

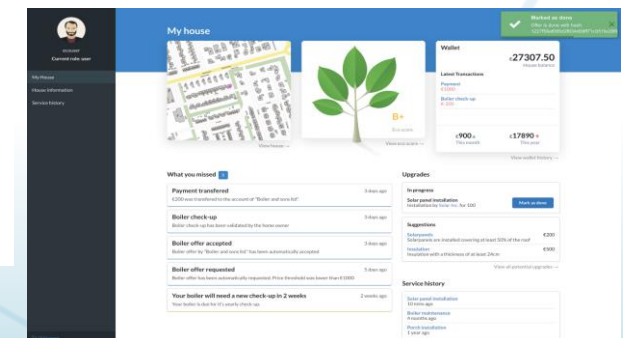
TRANSFORMING LAND REGISTRIES?

FROM “PAPER TWIN” TOWARDS A “DIGITAL TWIN” (?)

Digital Twin ‘building blocks’



source: <https://www.proptech.nl/blog/digital-twin-life-cycle/>





THANK YOU VERY MUCH FOR YOUR ATTENTION!

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