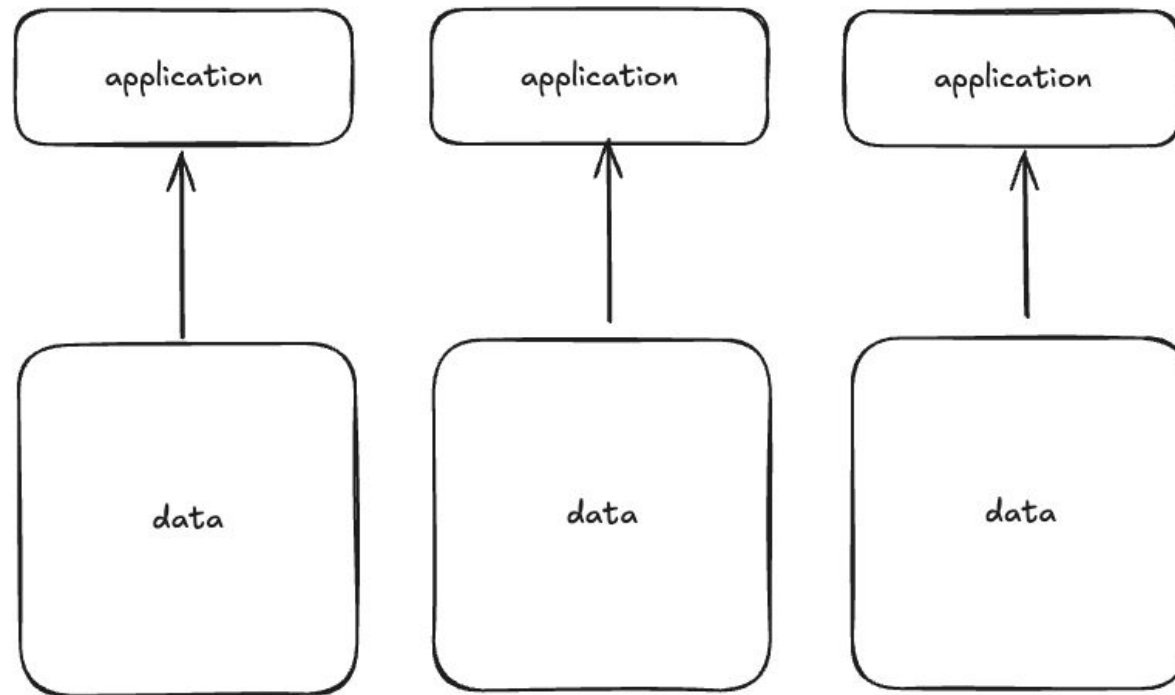


Making Data Everyone's Business

From Silos to Shared Practice

I See You Enterprise Data!



Who are You?



WORKING SINCE 2007 ON
SEMANTIC WEB TECHNOLOGIES.



BUILDING ENTERPRISE
KNOWLEDGE GRAPHS SINCE 2016
AT ZALANDO AND INTER IKEA.



W3C STANDARDS: RDF(S), OWL,
SKOS, SHACL, ETC.

My Personal Account of Data

WHAT I SEE IS BEING DONE

- Data for applications needs
- Data for application performance
- Cryptic column names
- VARCHAR length discussion
- Misuse of attributes for a different purpose because "It is faster and nobody uses that field anyway!"
- Data fields for misspelled words
- Very complex SQL that contains a lot of business know-how

WHAT I WISH WE WOULD DO

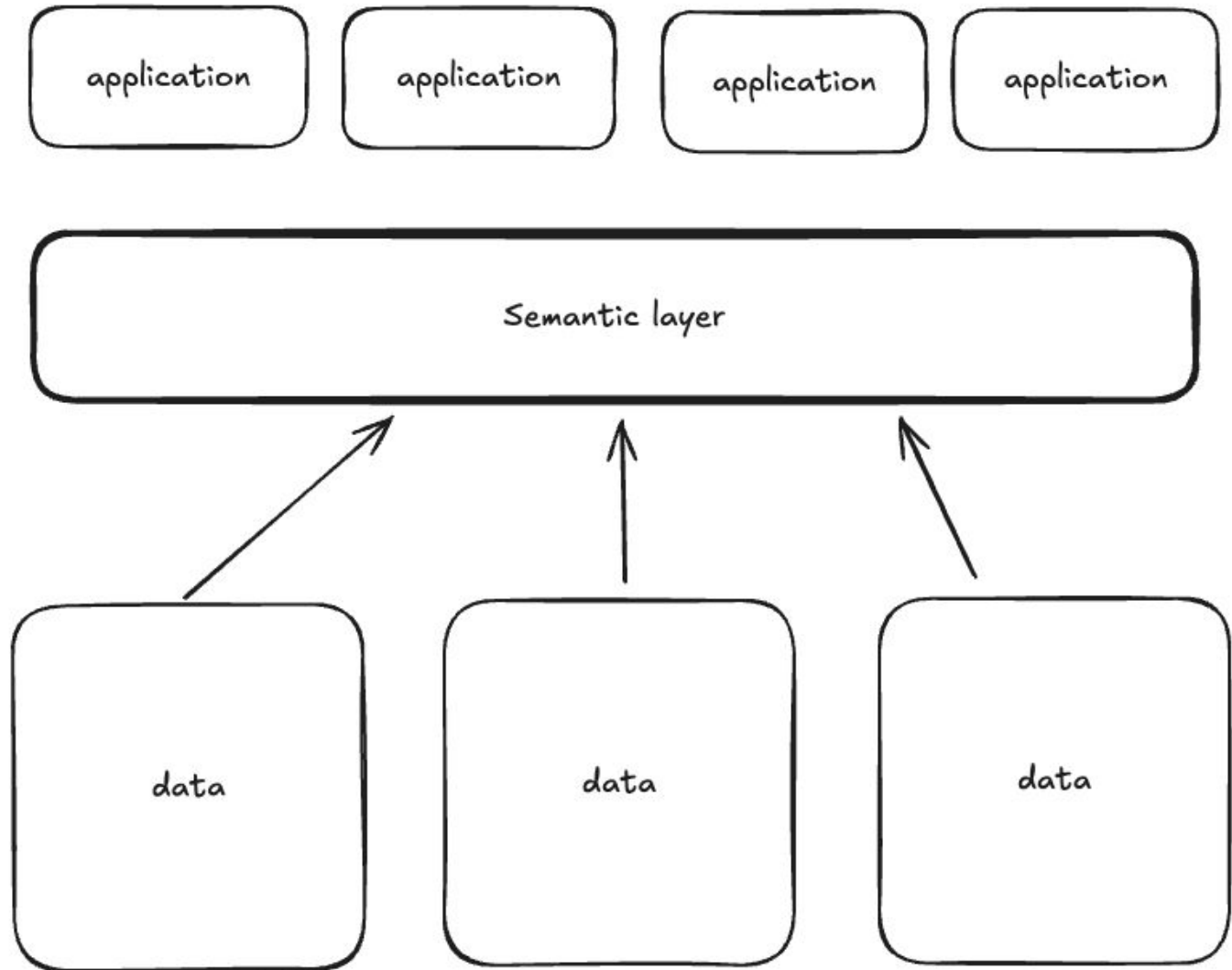
- Discuss: "What do we mean when we say..."
- Machine-readable
 - conceptual data model
 - reference data
- Reuse existing data models
- Reuse data
- Use normal sentence-like language in our data models
- ...

The Semantic Layer

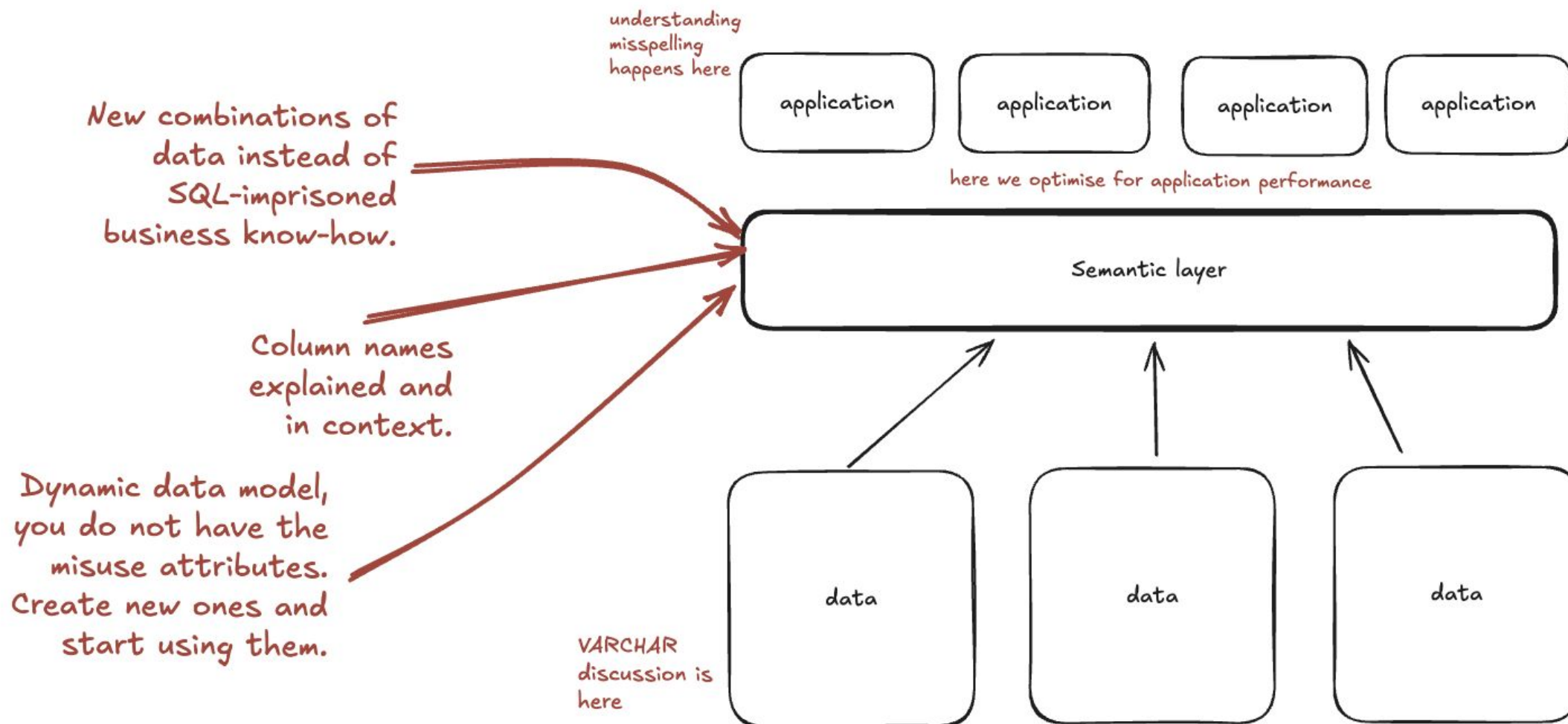
Data is not copied, it is recombined.

Canonical data model referring to business concept.

Application requirements are towards the semantic layer.

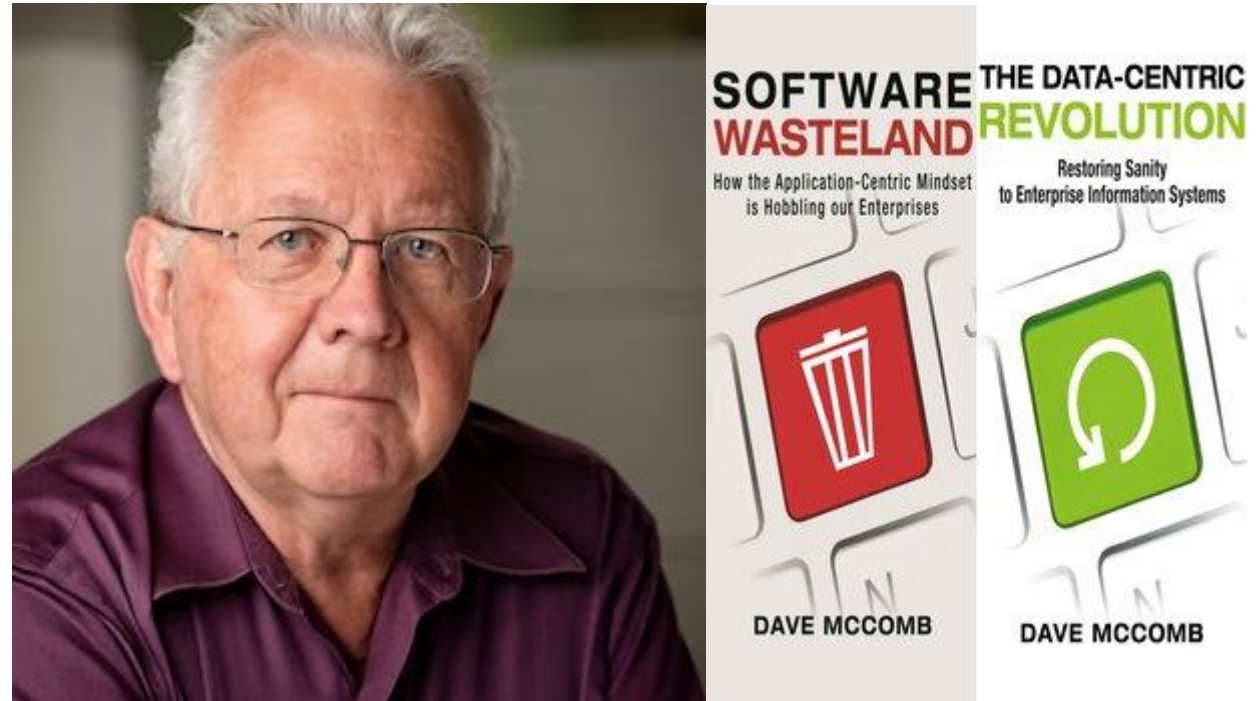


So How Does It Fix Things?



Data-Centric Approach

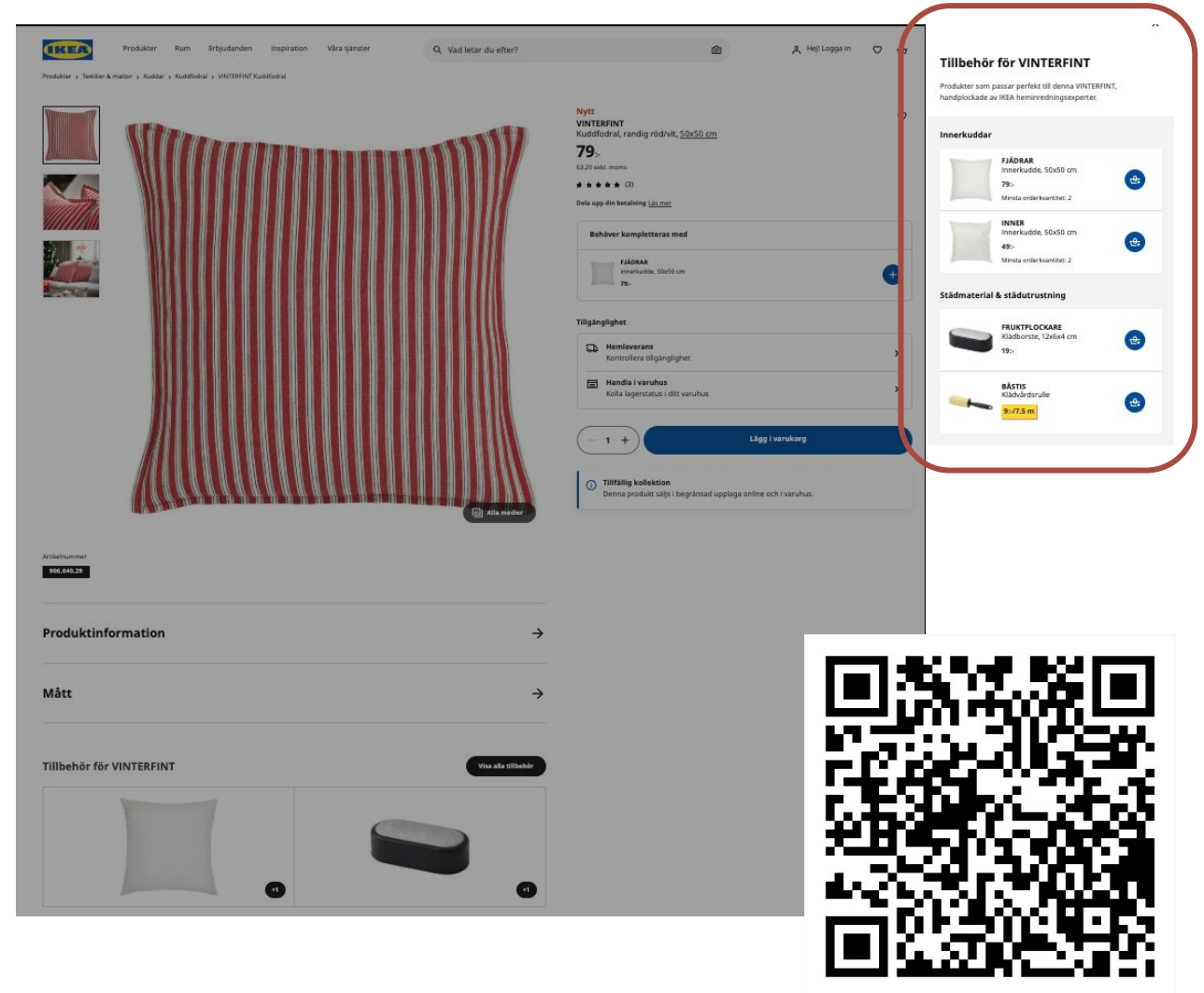
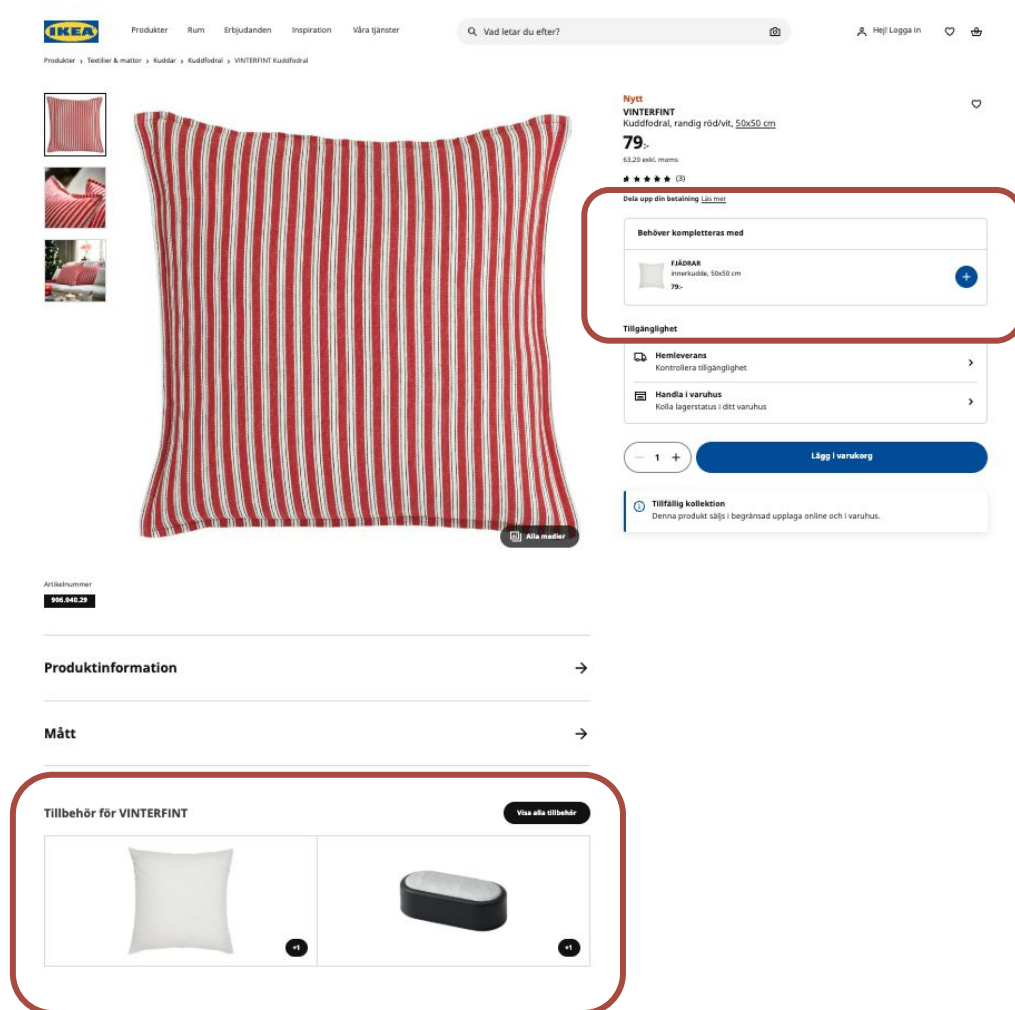
- Combines conceptual data model with logical data model
- Making the above machine-readable
- Gives data meaning and context
- Coined by Dave McComb



Data-Centric From the Get -Go

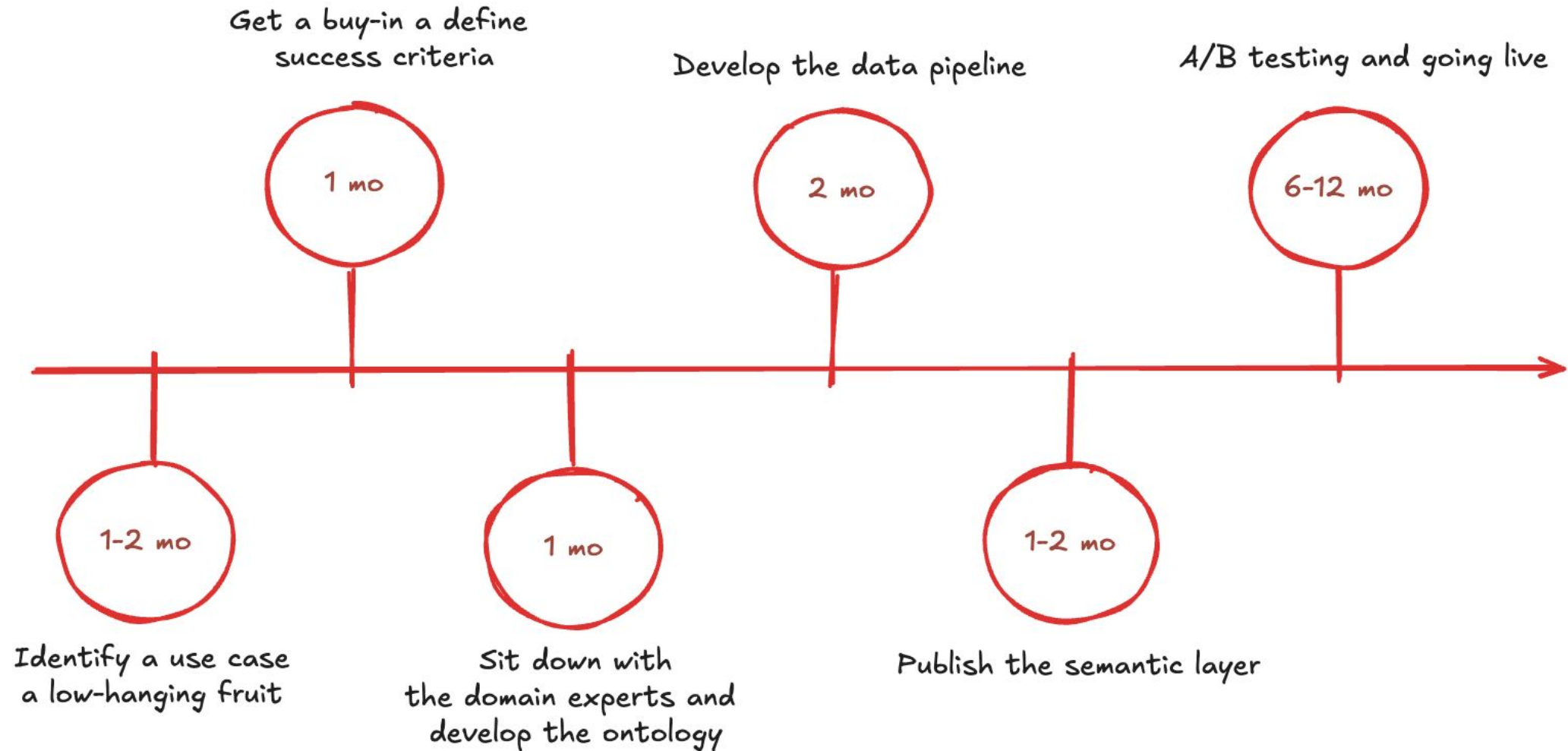
- Building a data-centric organisation from the beginning at the Finnish start-up In Parallel
- Product development and designs
- Data Model alignment before implementation
- Any database designs are derived from the central data model

The Semantic Layer – A Real-World Example

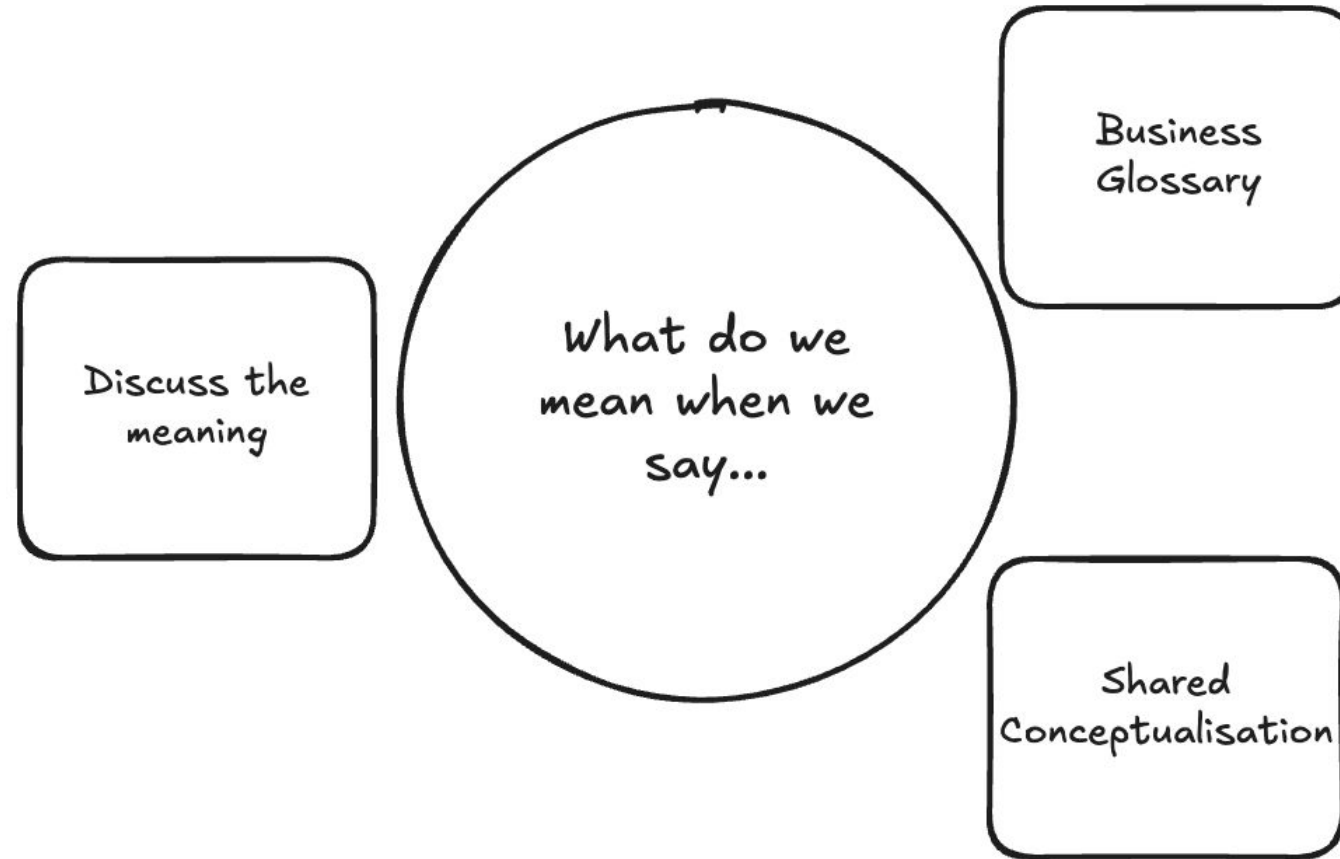


https://www.youtube.com/watch?v=s_xE_nfxxrdI

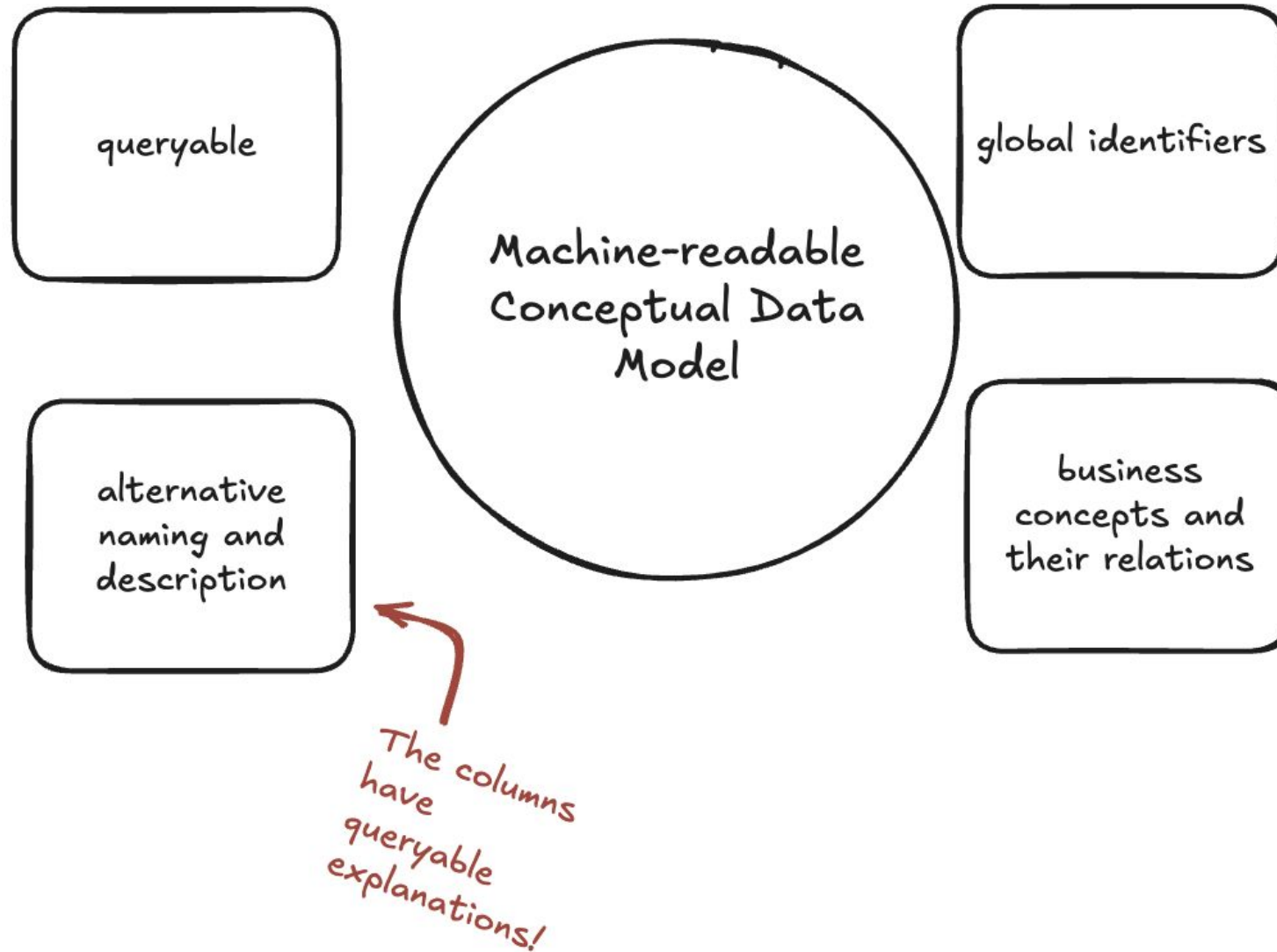
The Semantic Layer – Timeline



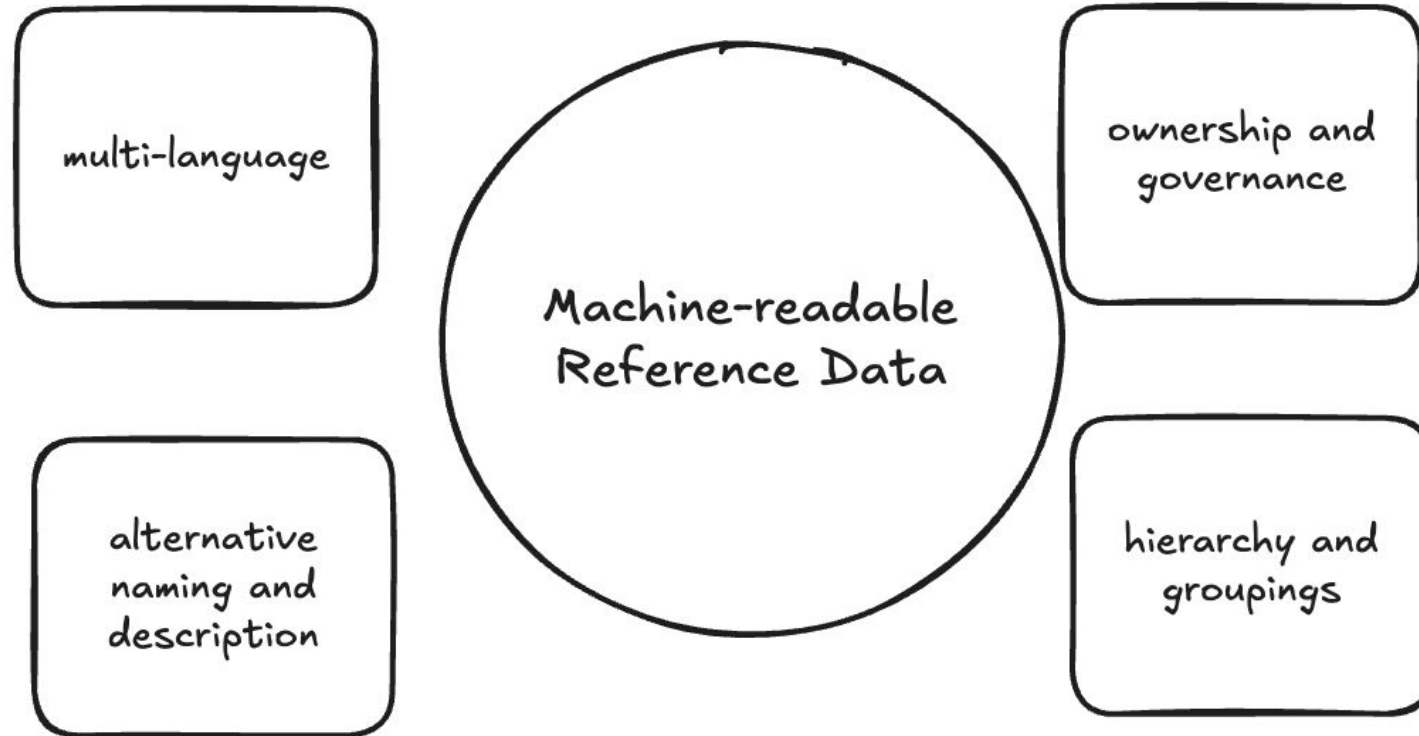
Back to My Wishlist...



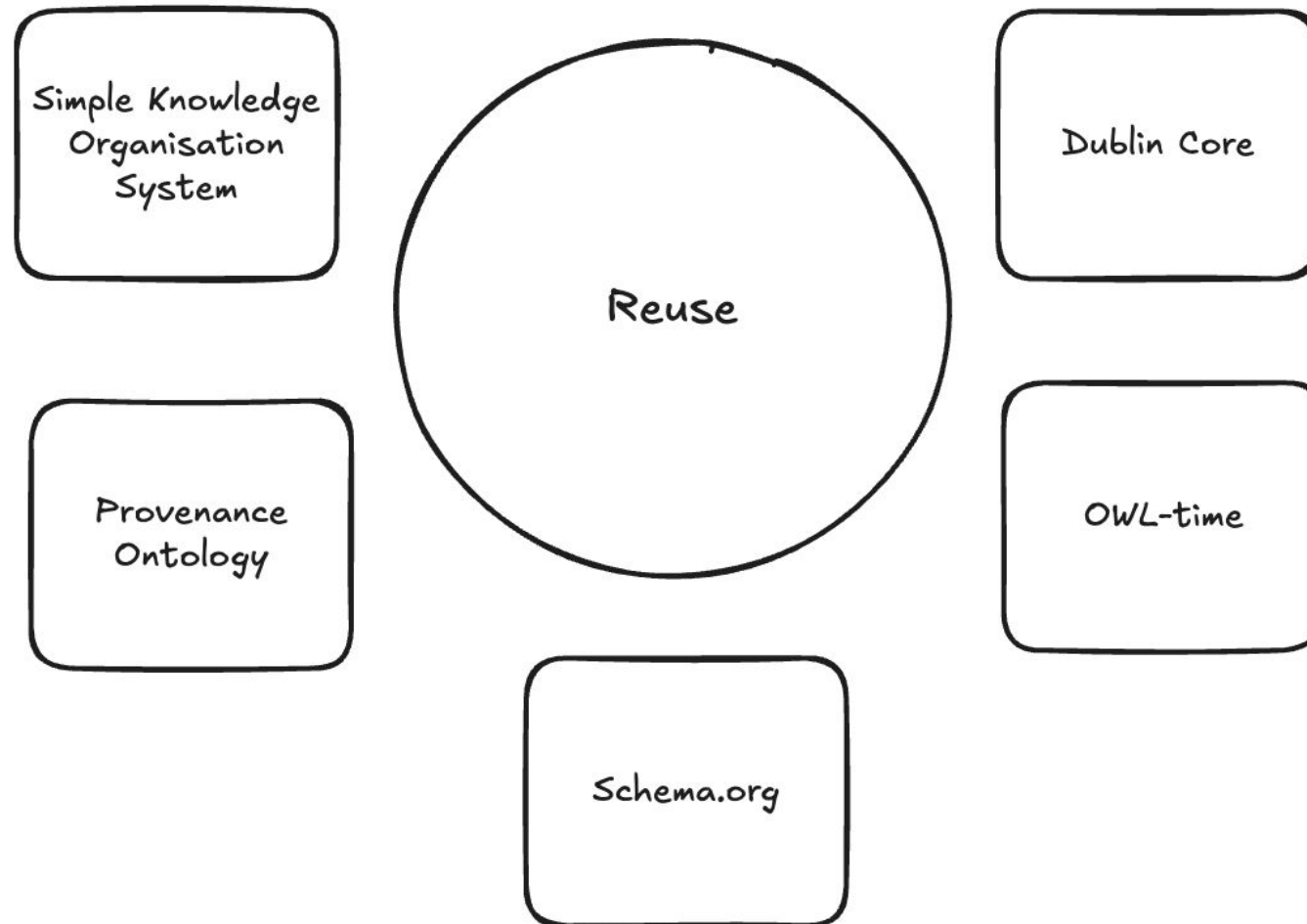
All I Want Is...



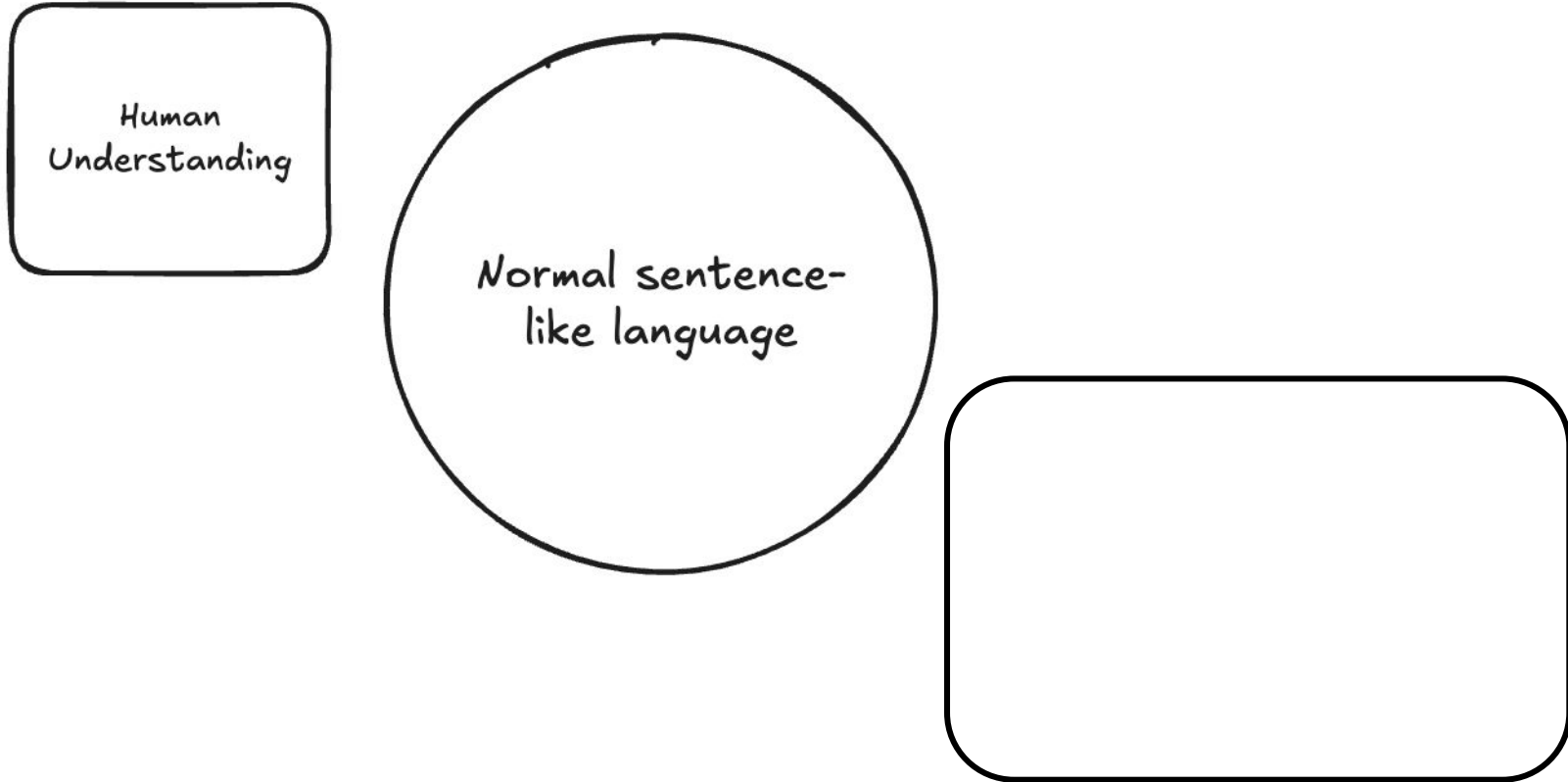
Santa, Please Bring Me...



Don't Lose It, Reuse It!



We Are All Benefitting From...



We Are All Benefitting From...

Human
Understanding

Normal sentence-
like language



Data-Centric Data Model Standards

*...psst she
means
ontologies!*

- Data model with Resource Description Framework, since 2004
- Reasoning with Web Ontology Language OWL, since 2004
- Querying with SPARQL, since 2008
- Constraints and data validation with Shapes Constraint Language, since 2017



Yes, Ontologies

An ontology is a formal, explicit specification of a shared conceptualization.

Studer, R., Benjamins, R., and Fensel, D.
Knowledge engineering: Principles and methods. Data & Knowledge Engineering,
1998, 25(1-2):161-198.

Let's keep in touch!

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 <http://linkedin.com/in/katsi>