

# Building with MCP, Agentic Systems, and Open Data: A Practitioner's Perspective

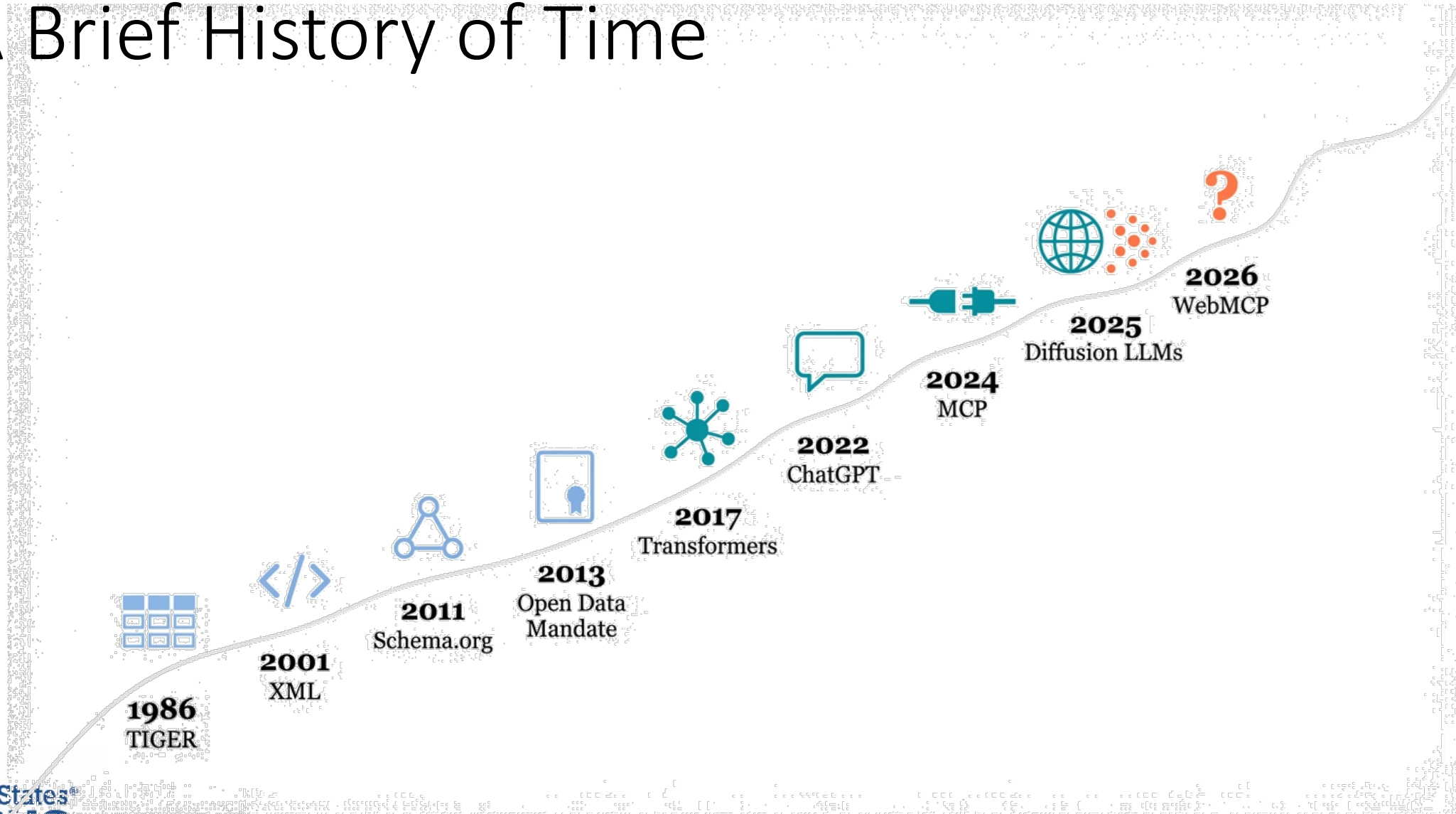
Brock Webb

AI Day for Federal Statistics 2026

April 30th, 2026

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# A Brief History of Time



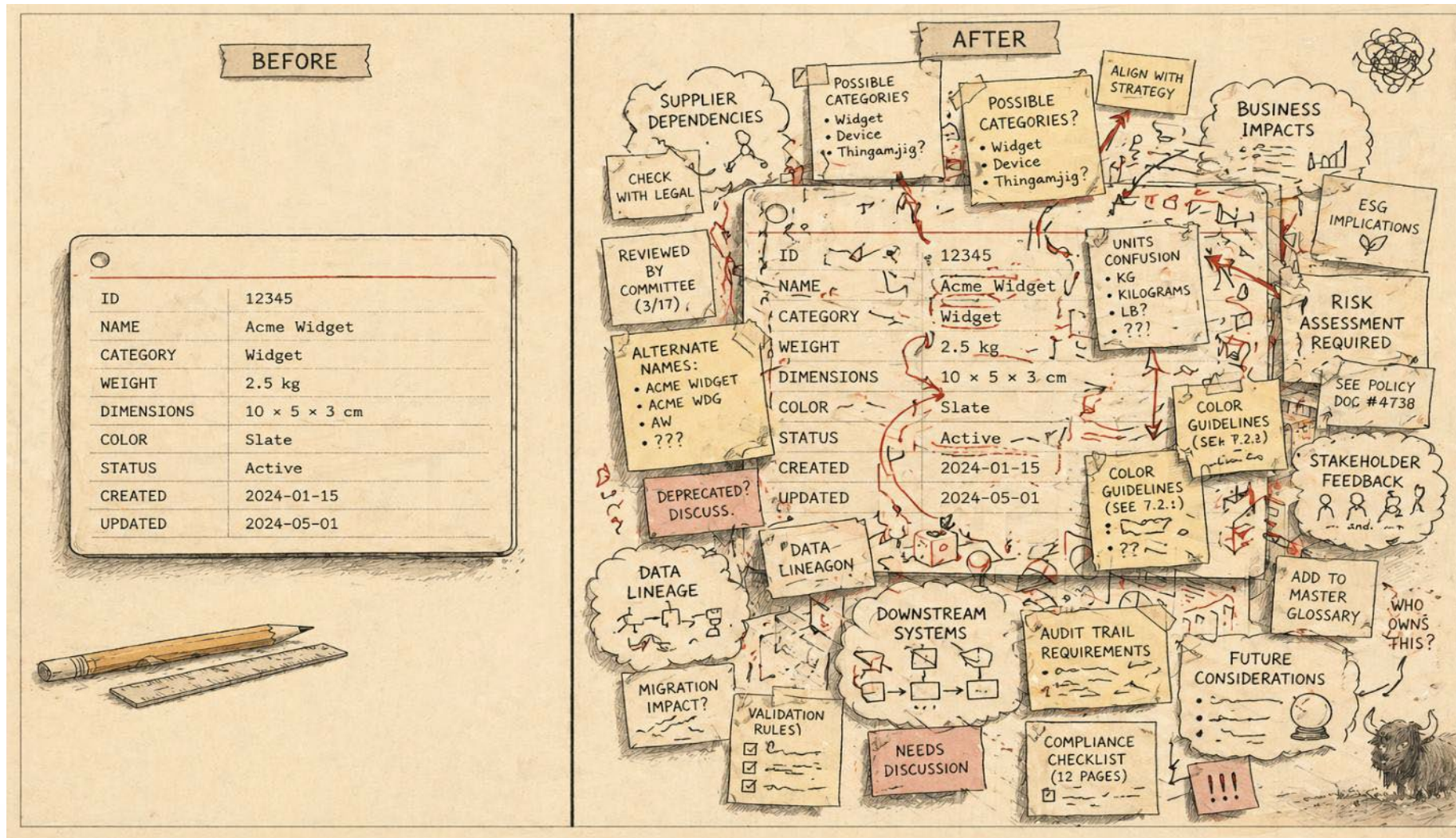
# Variance as a Feature



# Here Comes Everybody 2.0



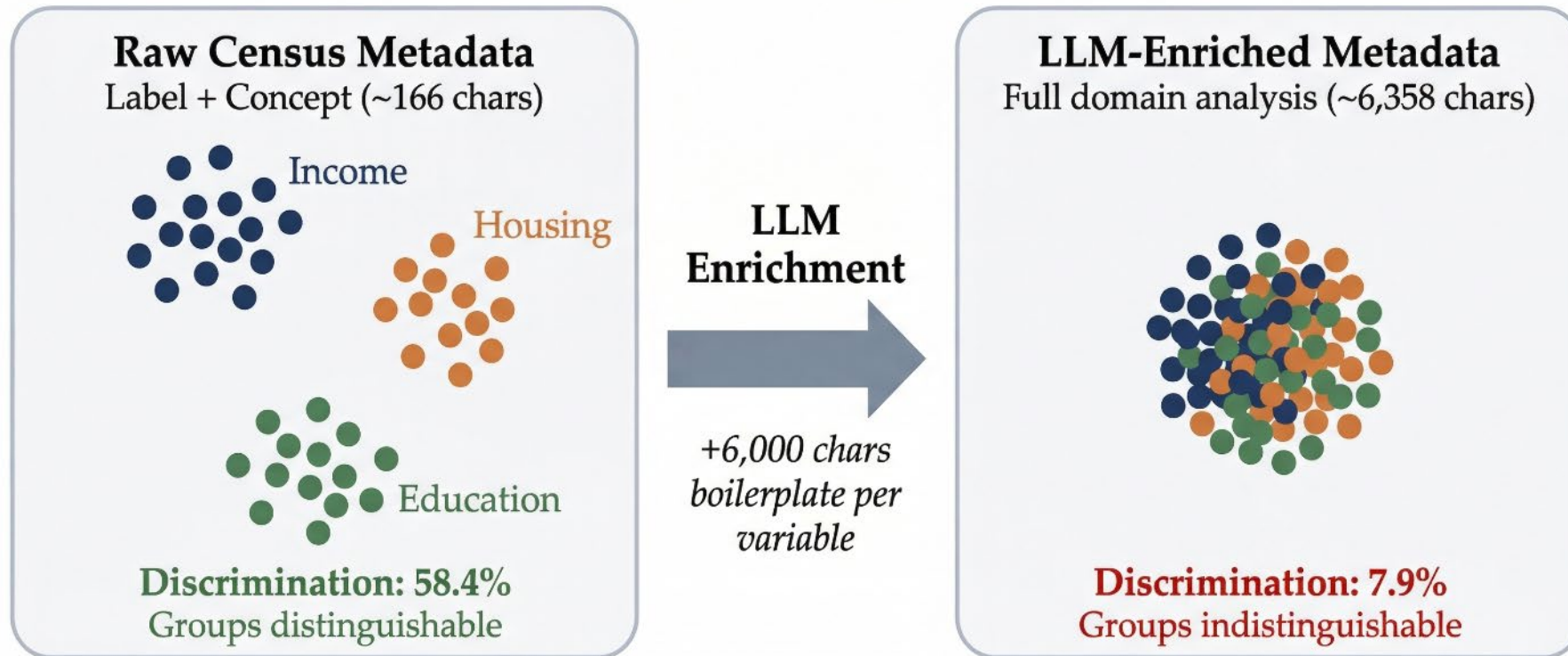
# How to Ruin Good Data in 90 Days.



# Precision In, Mush Out

## Semantic Smearing in Federal Statistical Data

Why retrieval-augmented generation fails in semantically homogeneous domains



Shared methodology language dominates the embedding space.  
Cross-group similarity increased **90%**; within-group only **30%**.

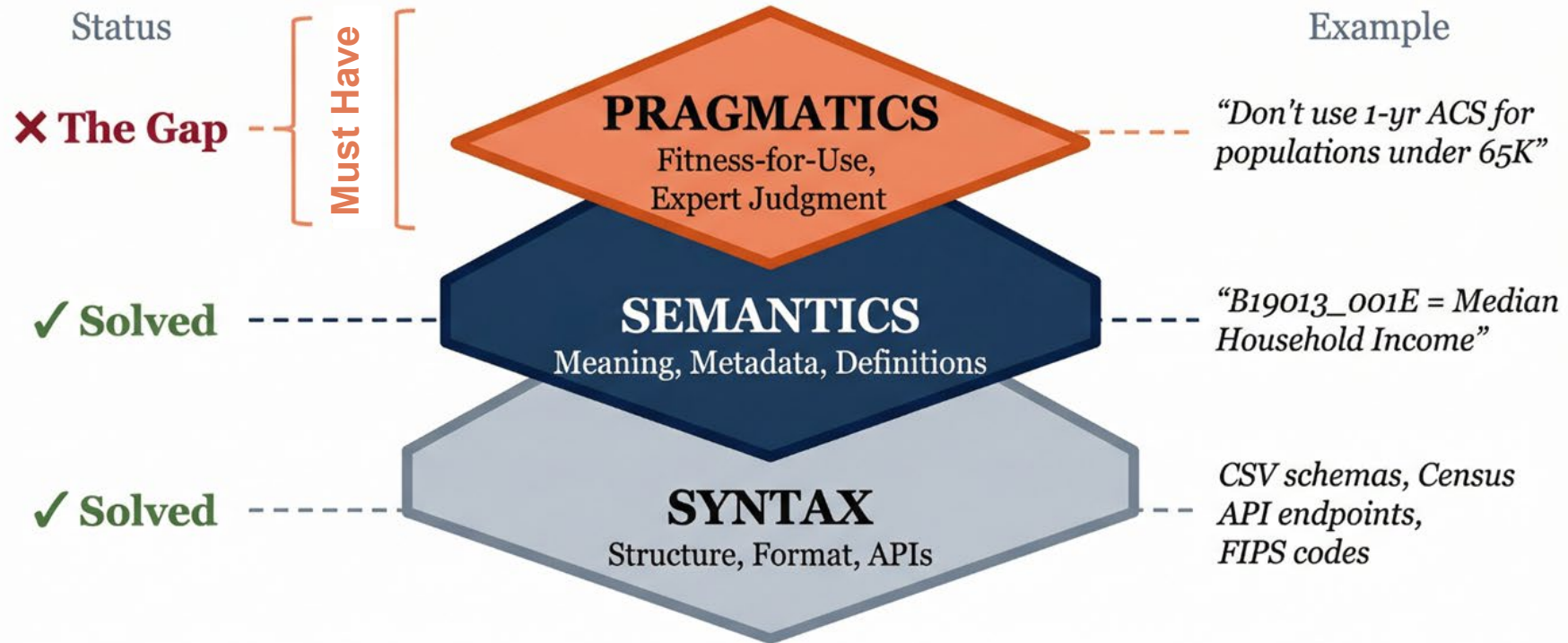
Source: Pragmatics: Delivering Expert Judgment to AI Systems [doi.org/10.5281/zenodo.18913092](https://doi.org/10.5281/zenodo.18913092)

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# All You Need is Judgement

## The Semiotic Stack Applied to Federal Statistical Data

Morris, C. W. (1938). *Foundations of the Theory of Signs*

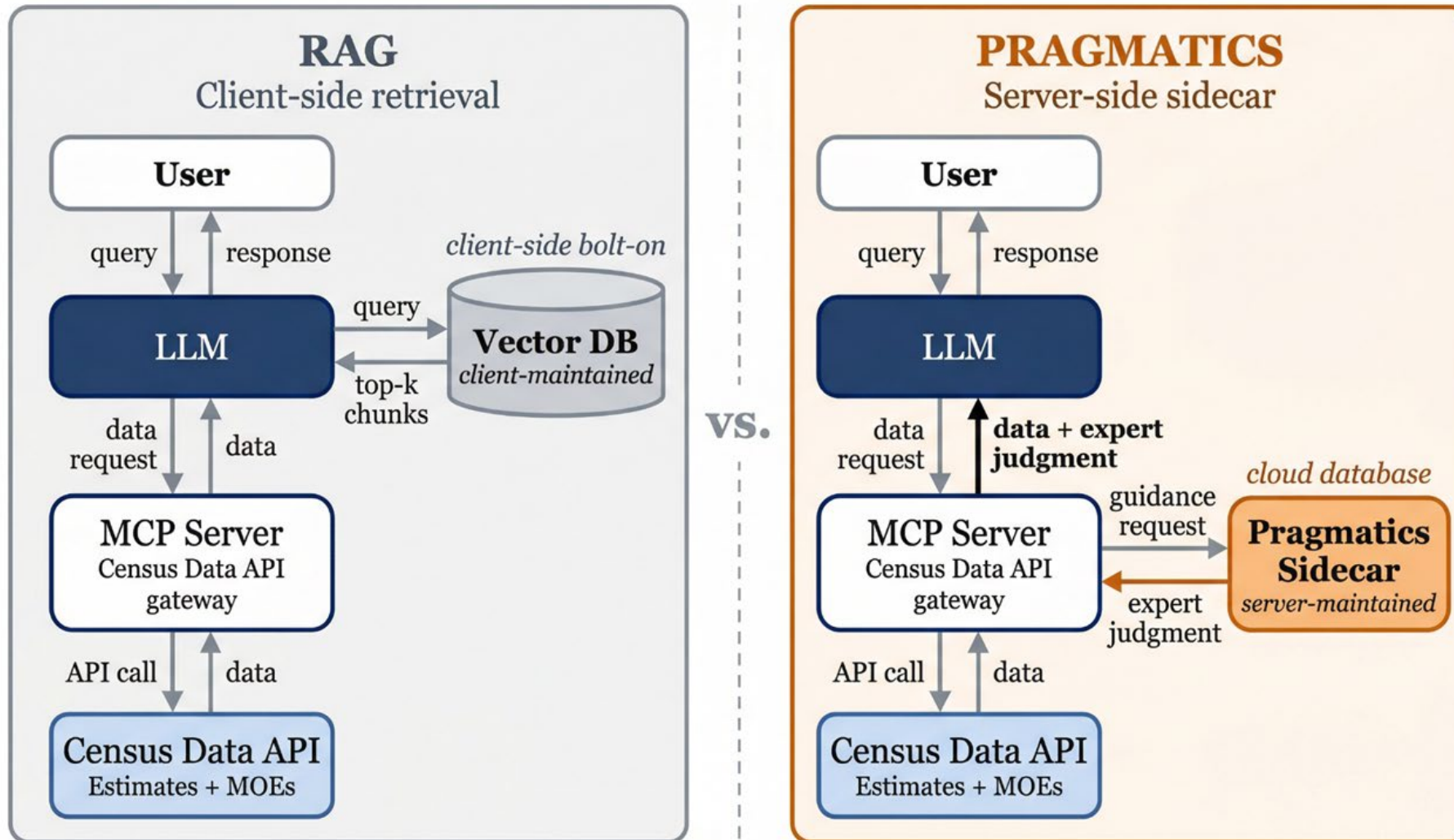


Federal AI-ready data guidance covers syntax and semantics.  
The missing layer is **pragmatics** — expert judgment about fitness-for-use.

Source: Pragmatics: Delivering Expert Judgment to AI Systems [doi.org/10.5281/zenodo.18913092](https://doi.org/10.5281/zenodo.18913092)

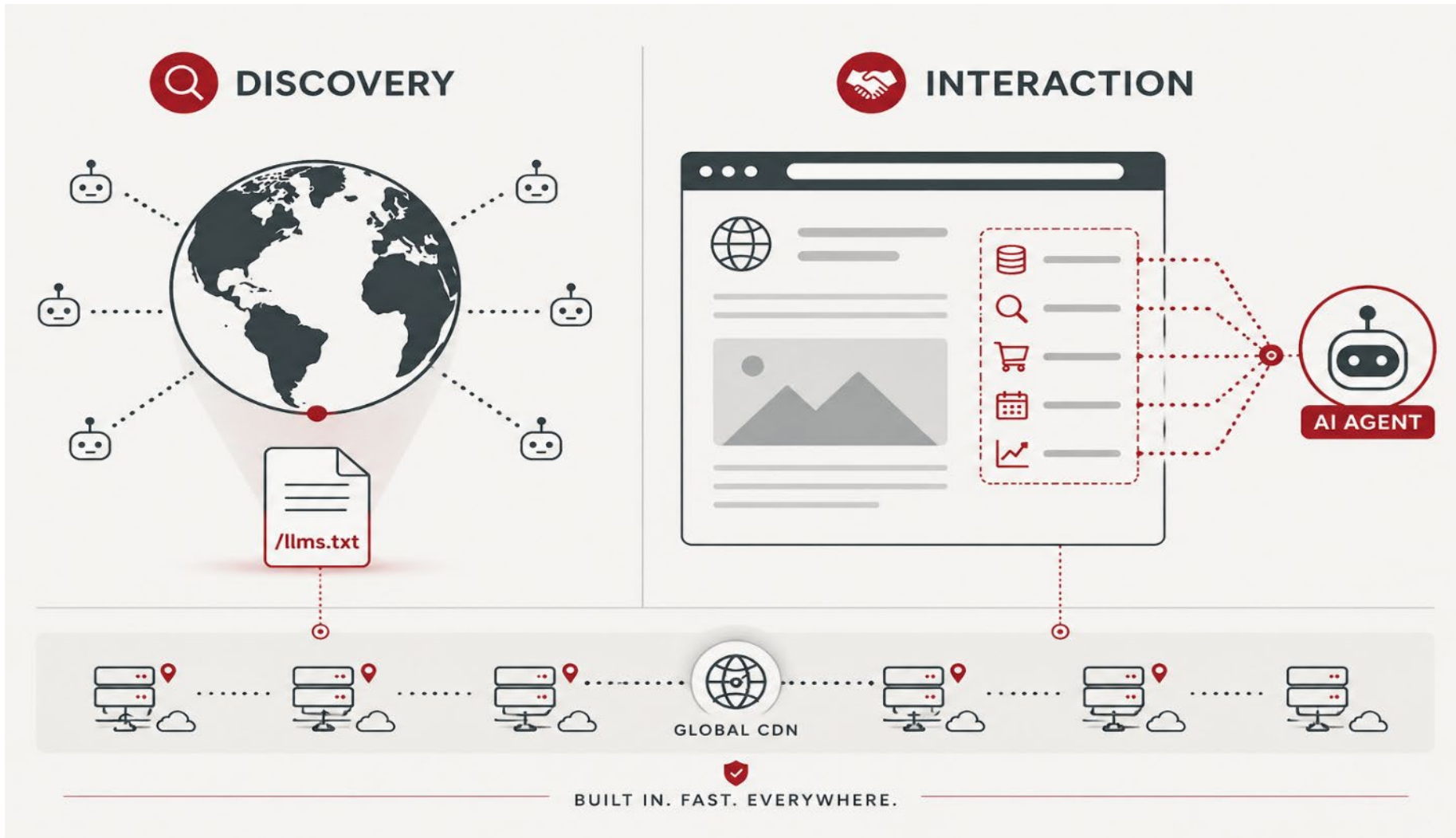
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# It Works at Scale (or It Doesn't Work)



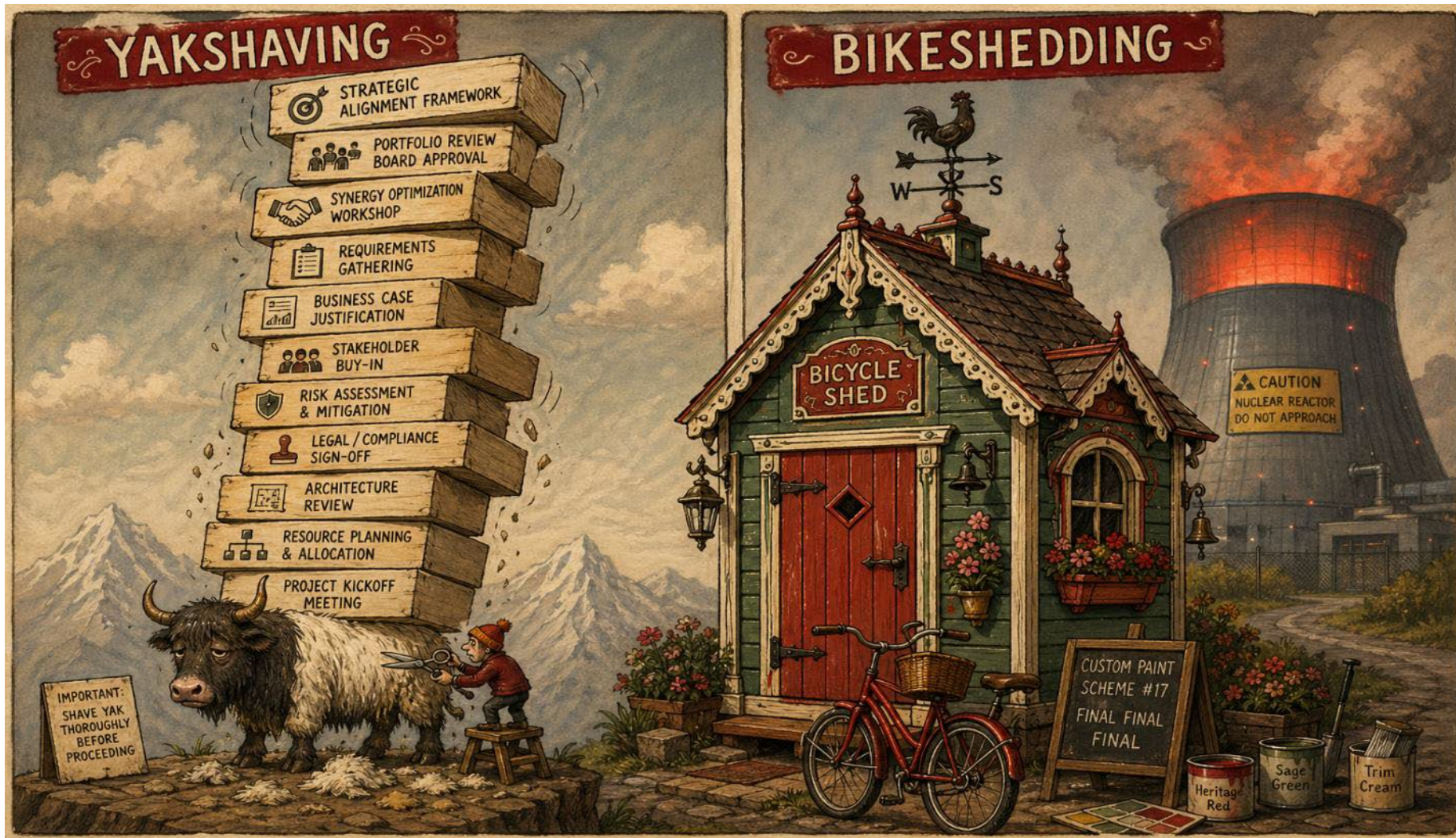
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# The Web is Becoming the MCP

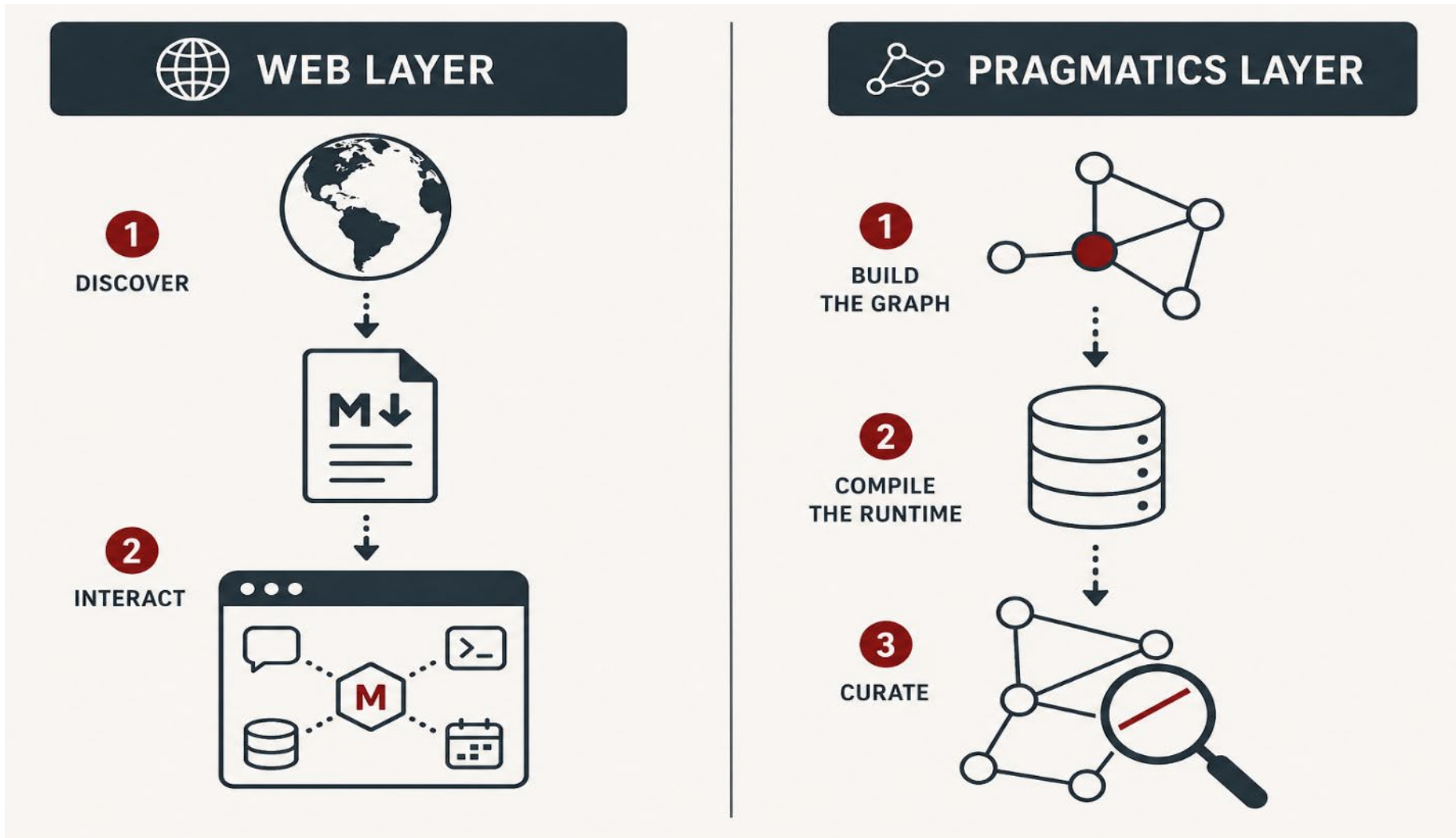




# How Good Teams Stall Out



# Two Tracks, Start Shipping!



# Oh, the Places We'll Go!

