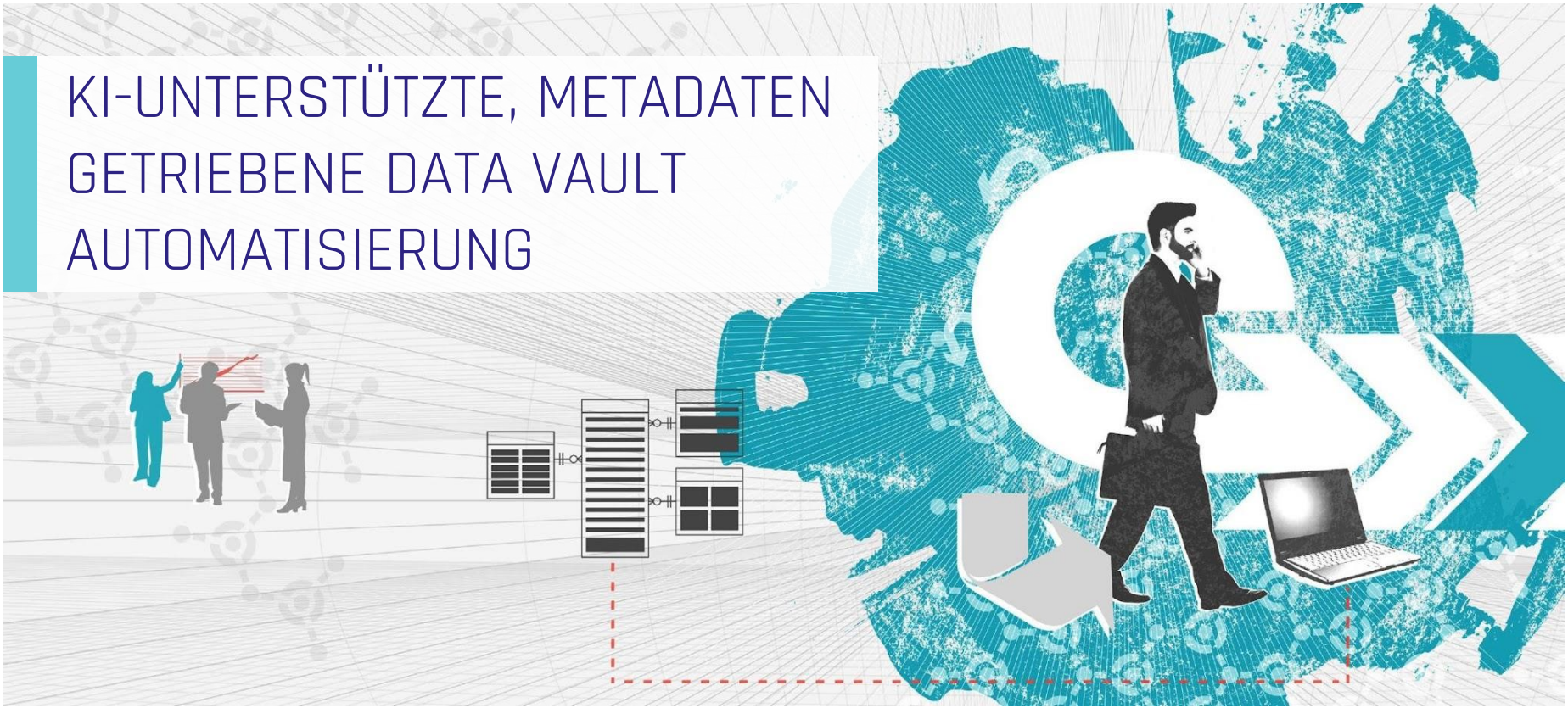
SCALEFREE

KI-UNTERSTÜTZTE, METADATEN GETRIEBENE DATA VAULT AUTOMATISIERUNG





TIM KIRSCHKE

MANAGING CONSULTANT

HEAD OF PRODUCT DEVELOPMENT

SCALEFREE

DATA PLATFORM SOLUTION PARTNER



Let's noodle

Build a Data Vault 2 implementation of my 250 SAP source tables following all best practices and set up a scheduled task for the daily loading.

+ Opus 5.5 Medium

1

CREATING A DATA VAULT

2

USING A DATA VAULT

3

USING A DATA PLATFORM

4

SEMANTICS

CREATING A DATA VAULT

- BUSINESS KEY DISCOVERY
- SOURCE INTERPRETATION
- ENTITY CLASSIFICATION
- NAMING STANDARDS
- DDL & LOAD LOGIC

USING A DATA VAULT

- QUESTION FRAMING
- EXPLORATION & DISCOVERY
- JOIN PATH CONSTRUCTION
- BUSINESS RULE IMPLEMENTATION
- PERFORMANCE

CREATING A DATA VAULT



CREATING A DATA VAULT

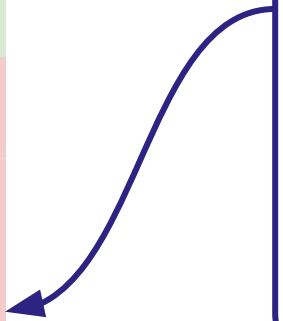
BUSINESS KEY DISCOVERY

SOURCE INTERPRETATION

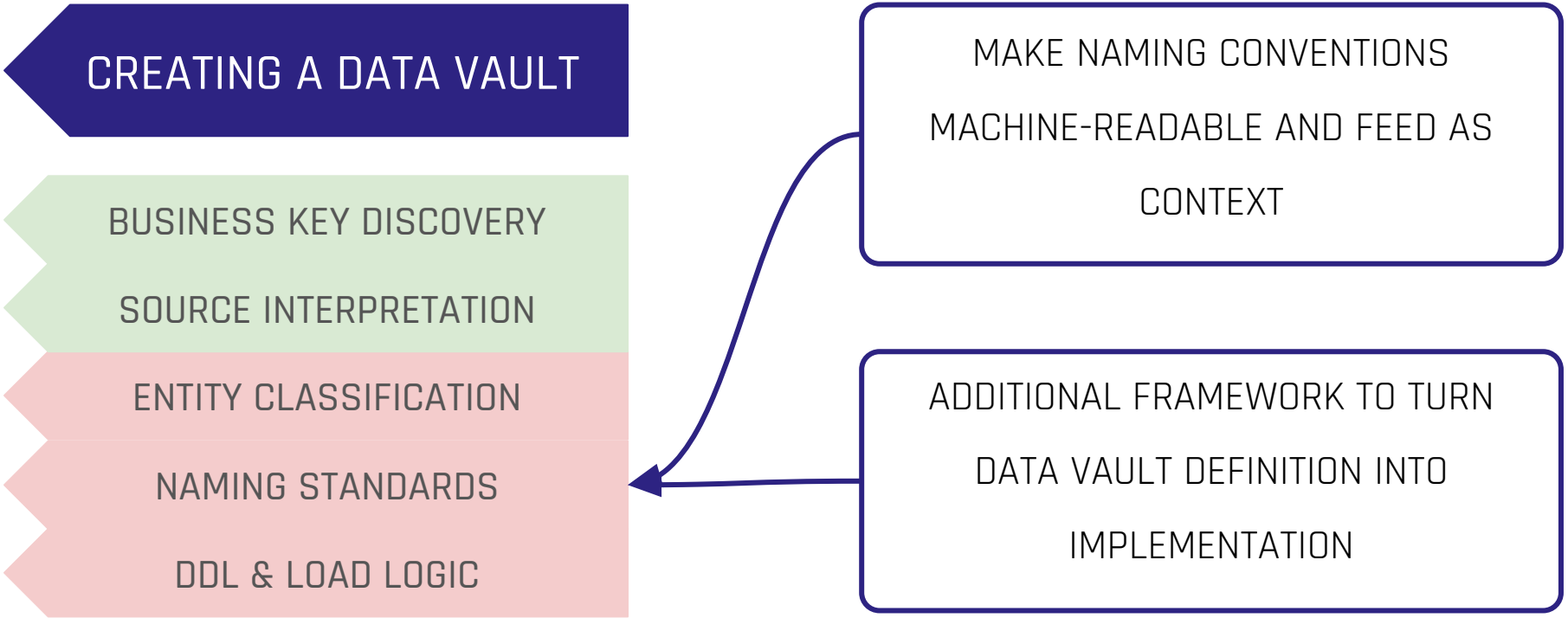
ENTITY CLASSIFICATION

NAMING STANDARDS

DDL & LOAD LOGIC



1. MATCHING AUTOMATION TOOL
    a. OPEN CODE
    b. MCP SERVER
2. TEMPLATED LOADING PATTERNS
3. USAGE INSTRUCTIONS AKA SKILLS


CREATING A DATA VAULT
BUSINESS KEY DISCOVERY
SOURCE INTERPRETATION
ENTITY CLASSIFICATION
NAMING STANDARDS
DDL & LOAD LOGIC
MAKE NAMING CONVENTIONS MACHINE-READABLE AND FEED AS CONTEXT
ADDITIONAL FRAMEWORK TO TURN DATA VAULT DEFINITION INTO IMPLEMENTATION

CREATING A DATA VAULT

BUSINESS KEY DISCOVERY

SOURCE INTERPRETATION

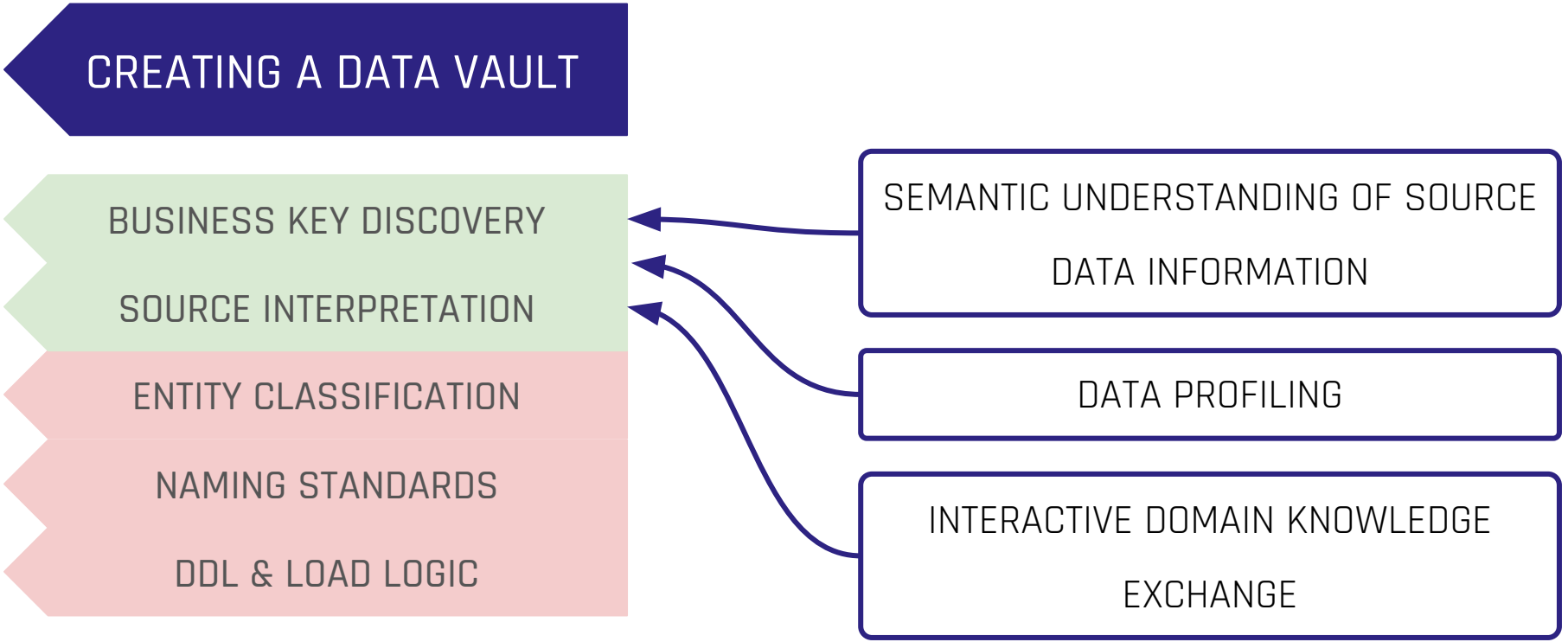
ENTITY CLASSIFICATION

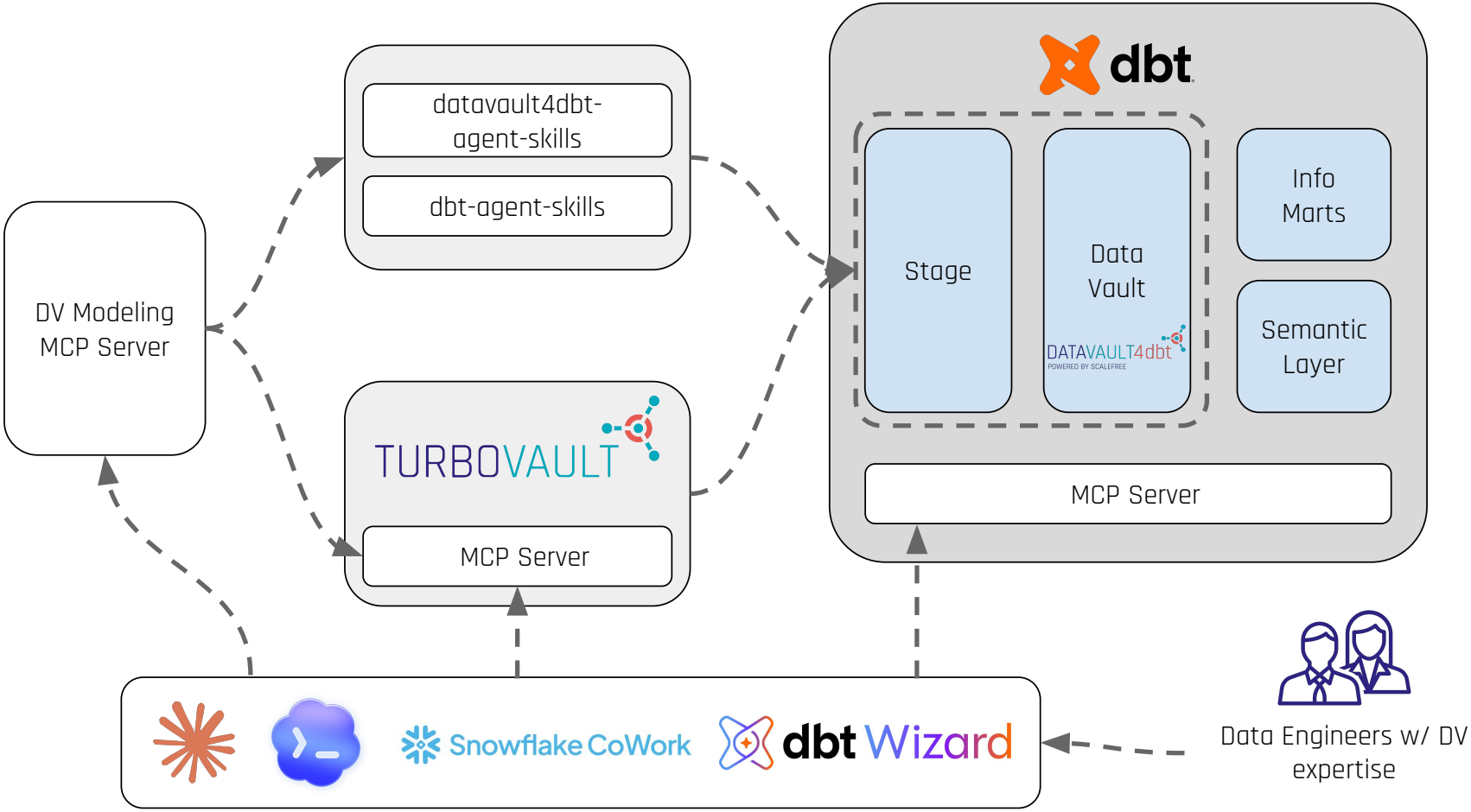
NAMING STANDARDS

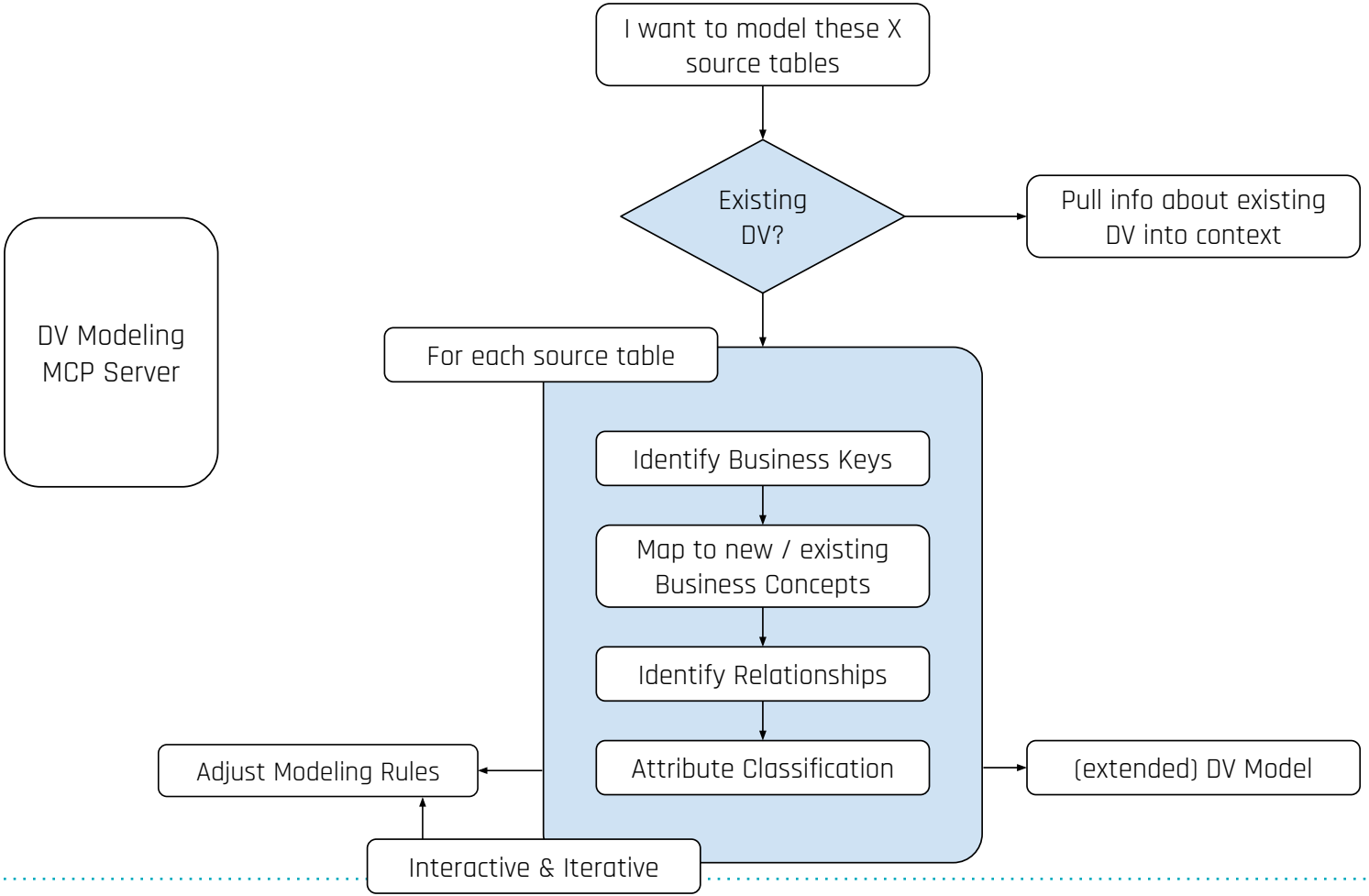
DDL & LOAD LOGIC

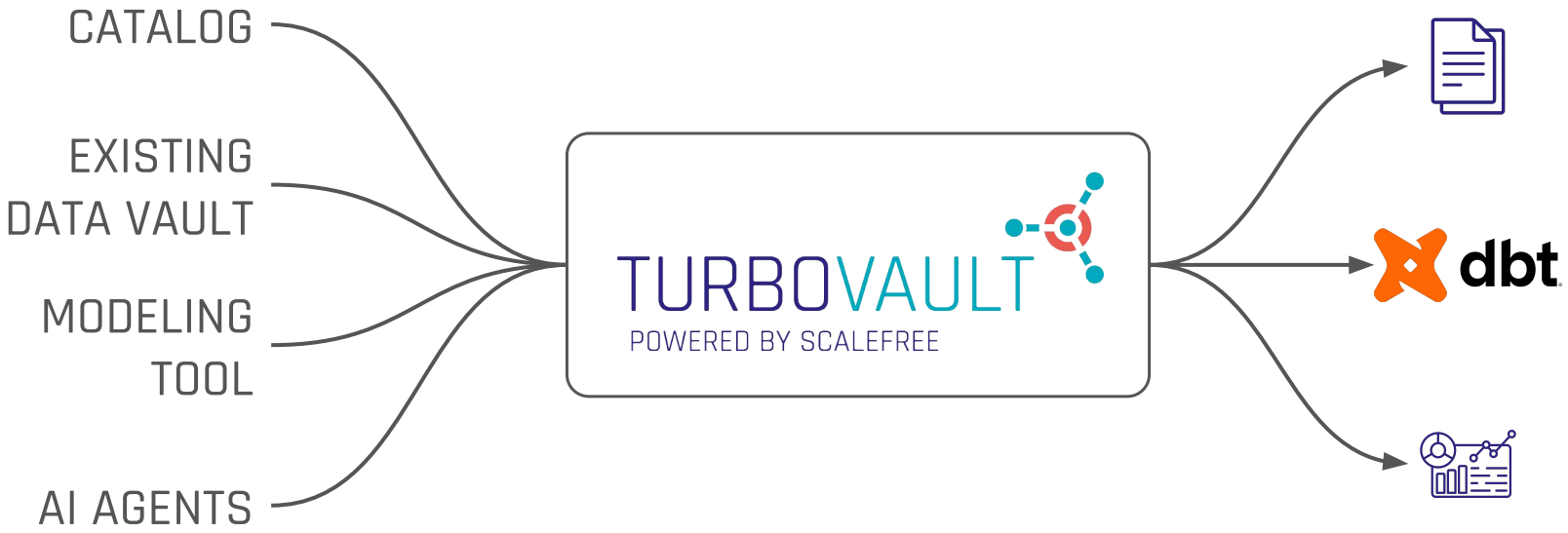
CLEAR RULE-ENGINE BASED ON FUNDAMENTAL DATA VAULT PRINCIPLES

CREATING A DATA VAULT




dbt
datavault4dbt-agent-skills
dbt-agent-skills
DV Modeling MCP Server
TURBOVAULT
MCP Server
Stage
Data Vault
DATAVAULT4dbt
POWERED BY SCALEFREE
Info Marts
Semantic Layer
MCP Server
Snowflake CoWork
dbt Wizard
Data Engineers w/ DV expertise


I want to model these X source tables
Existing DV?
Pull info about existing DV into context
DV Modeling MCP Server
For each source table
Identify Business Keys
Map to new / existing Business Concepts
Identify Relationships
Attribute Classification
(extended) DV Model
Adjust Modeling Rules
Interactive & Iterative




```
pip install turbovault-engine
```

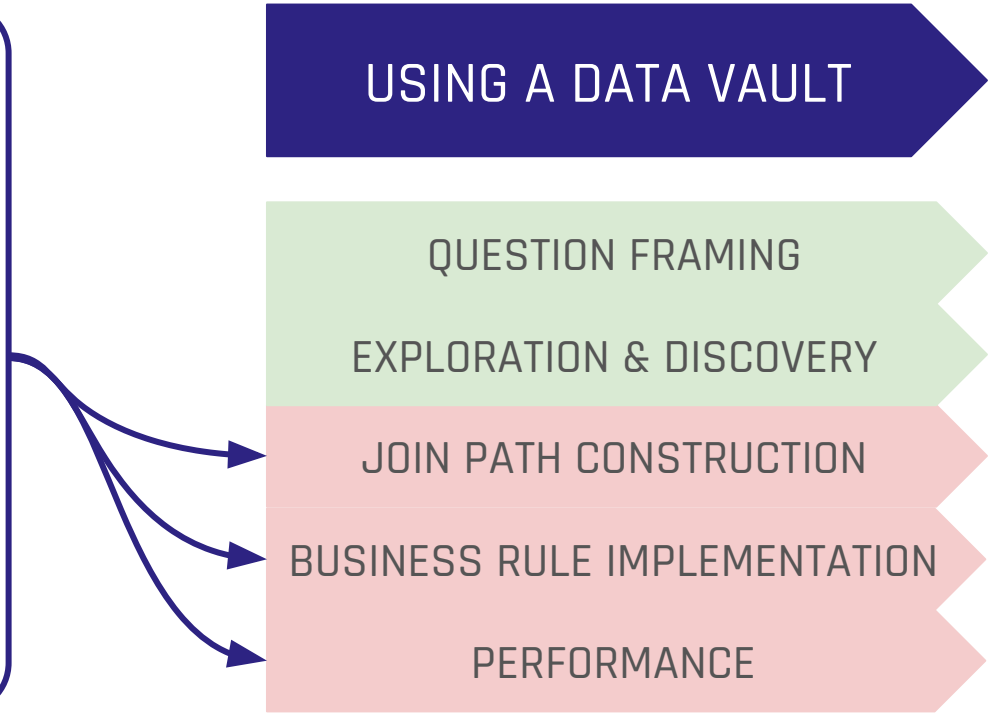
WEBAPP COMING SOON!

USING A DATA VAULT



- ❑ DV IMPLEMENATION MUST BE MACHINE-READABLE
- ❑ CODING GUIDELINES FOR BUSINESS VAULT
- ❑ DV JOIN PATTERNS & USAGE INSTRUCTIONS

→WRAP ALL INTO MARKDOWN (`.md`)



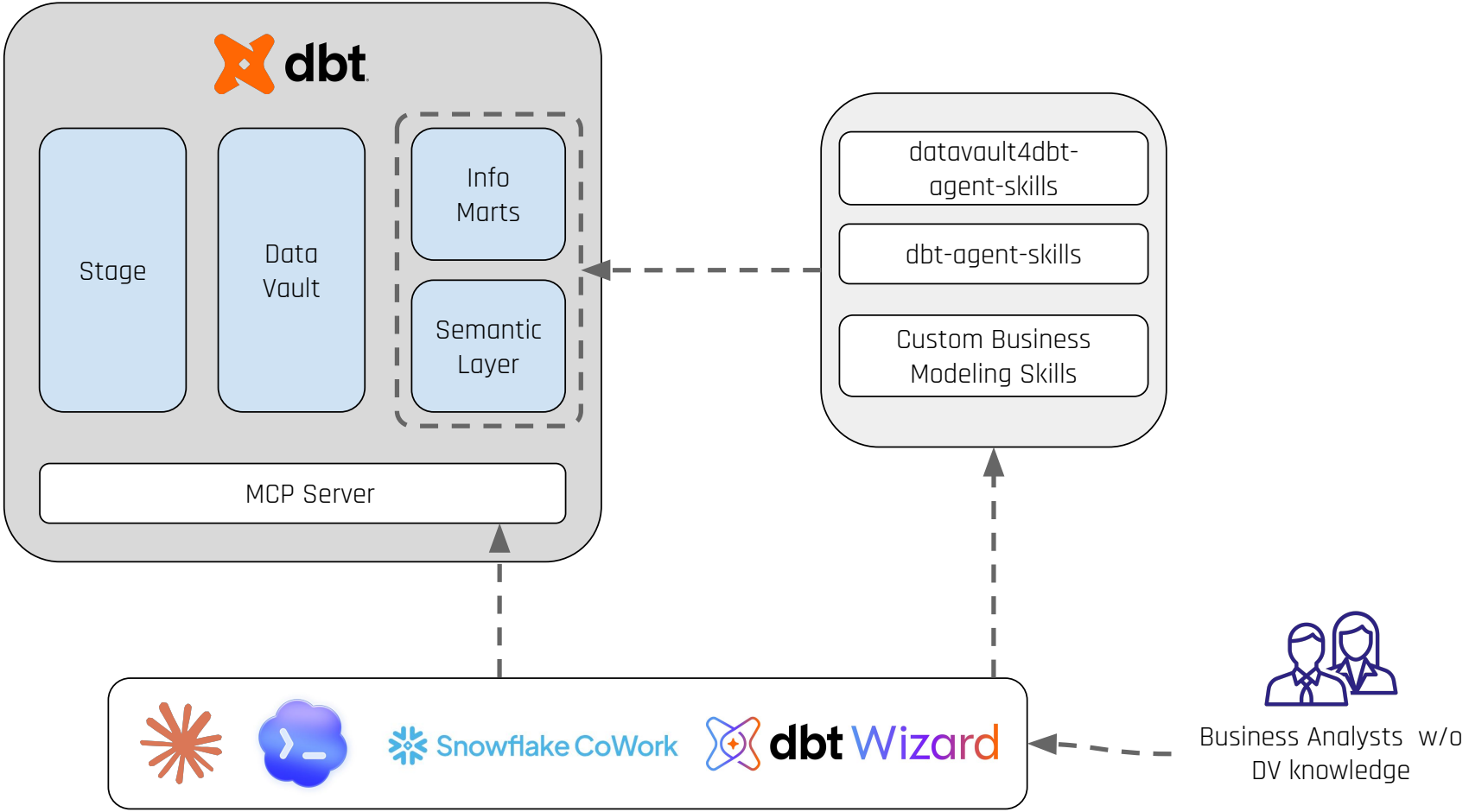
USING A DATA VAULT

- ❑ REQUIREMENT DISCUSSIONS
- ❑ LOOP ENGINEERING

→WRAP BEHAVIOUR INTO INSTRUCTIONS AND EXPOSE

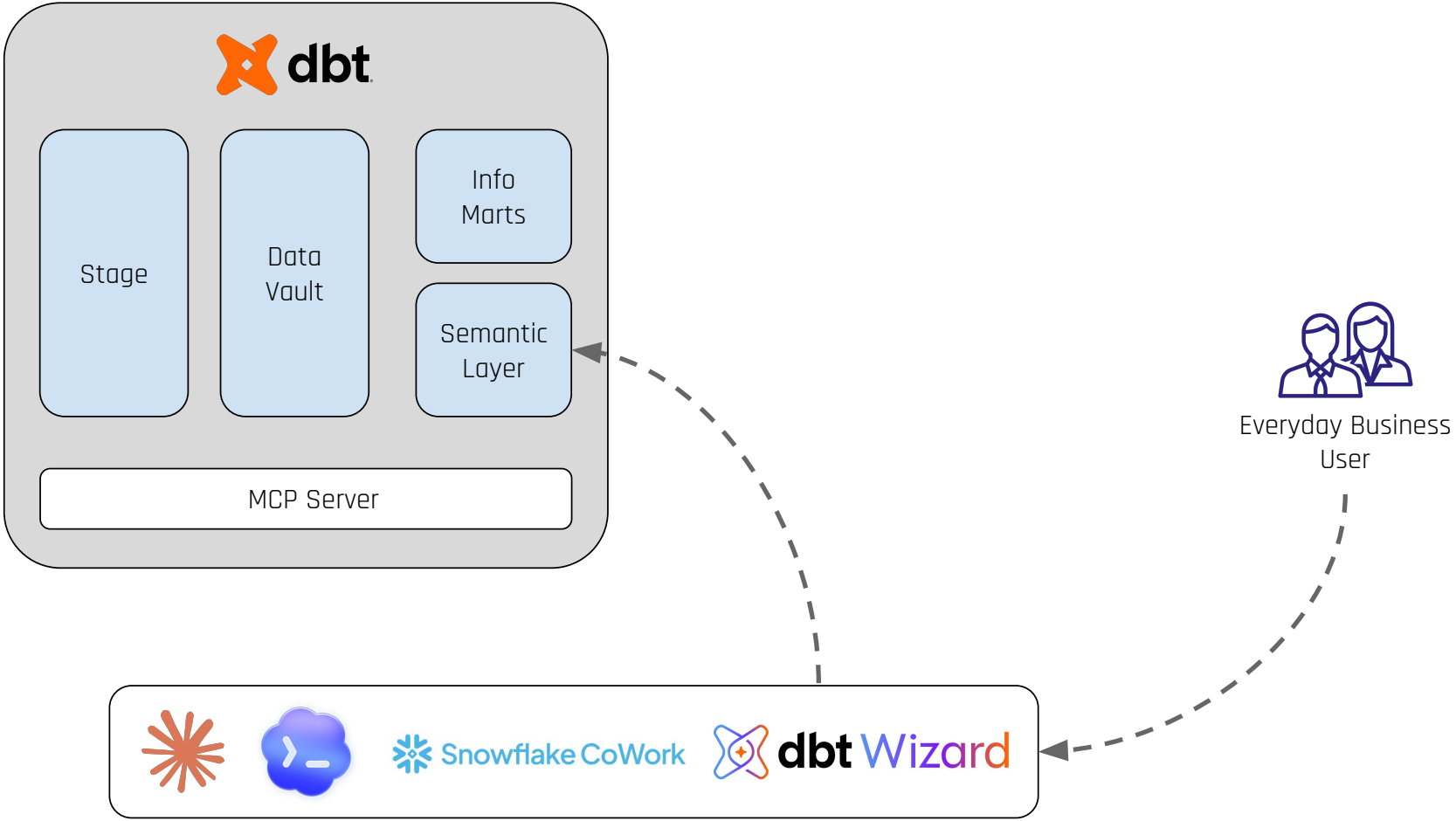


- QUESTION FRAMING
- EXPLORATION & DISCOVERY
- JOIN PATH CONSTRUCTION
- BUSINESS RULE IMPLEMENTATION
- PERFORMANCE


dbt
Stage
Data Vault
Info Marts
Semantic Layer
MCP Server
datavault4dbt-agent-skills
dbt-agent-skills
Custom Business Modeling Skills
Snowflake CoWork
dbt Wizard
Business Analysts w/o DV knowledge

AI-POWERED ANALYTICS & INSIGHTS

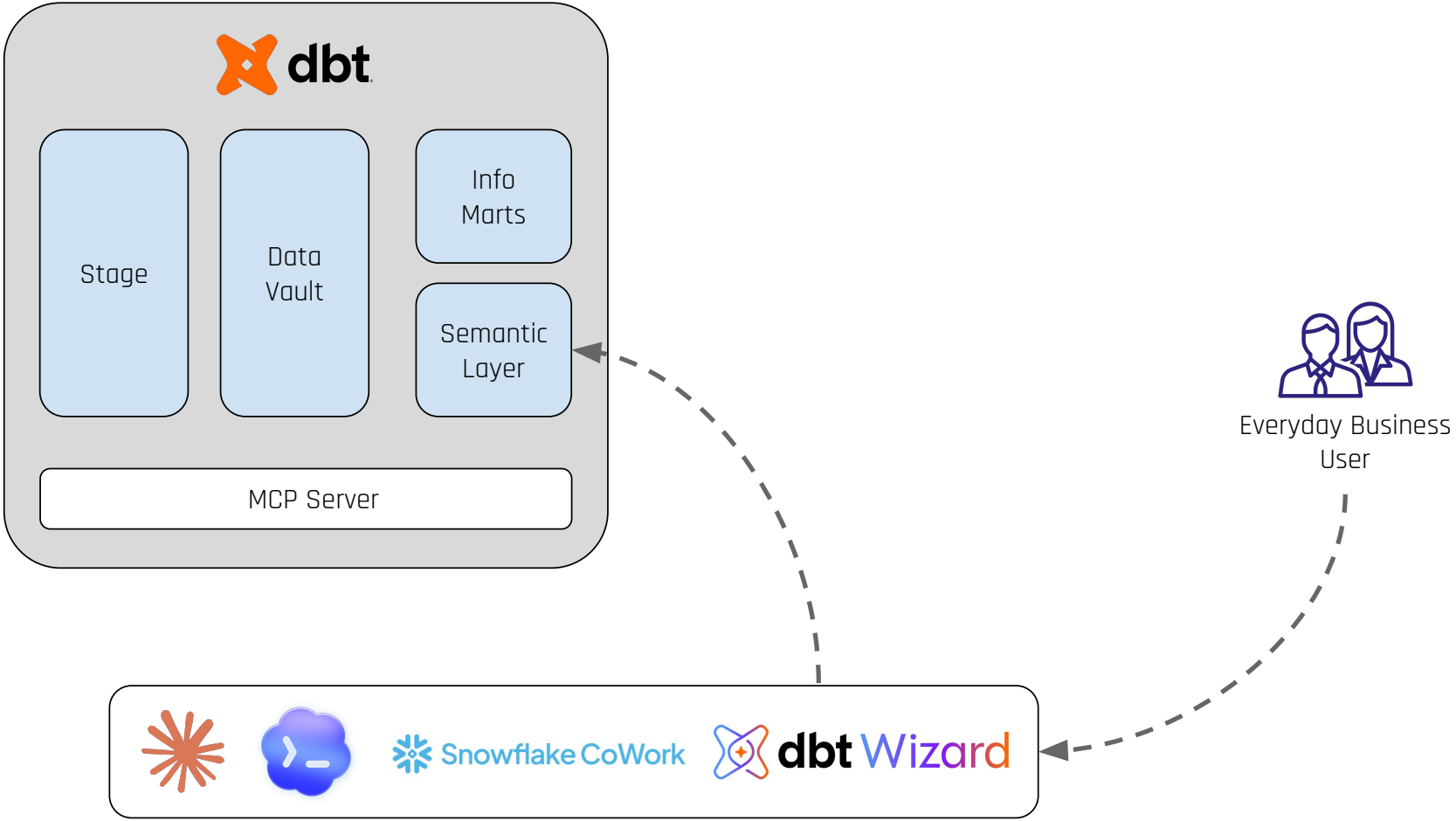



dbt
Stage
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Semantic Layer
MCP Server
Everyday Business User
Snowflake CoWork
dbt Wizard

WHY SEMANTIC LAYER?

	ACCURACY	
MODEL	TEXT-TO-SQL	SEMANTIC LAYER
CLAUDE SONNET 4.6	90.0%	98.2%
CHATGPT 5.3 CODEX	84.1%	100.0%

Source: dbt Labs, April 2026
docs.getdbt.com/blog/semantic-layer-vs-text-to-sql-2026


dbt
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SCALEFREE



- ✓ **Clear foundations**
- ✓ **Architecture and AI**
- ✓ **Operational best practices**

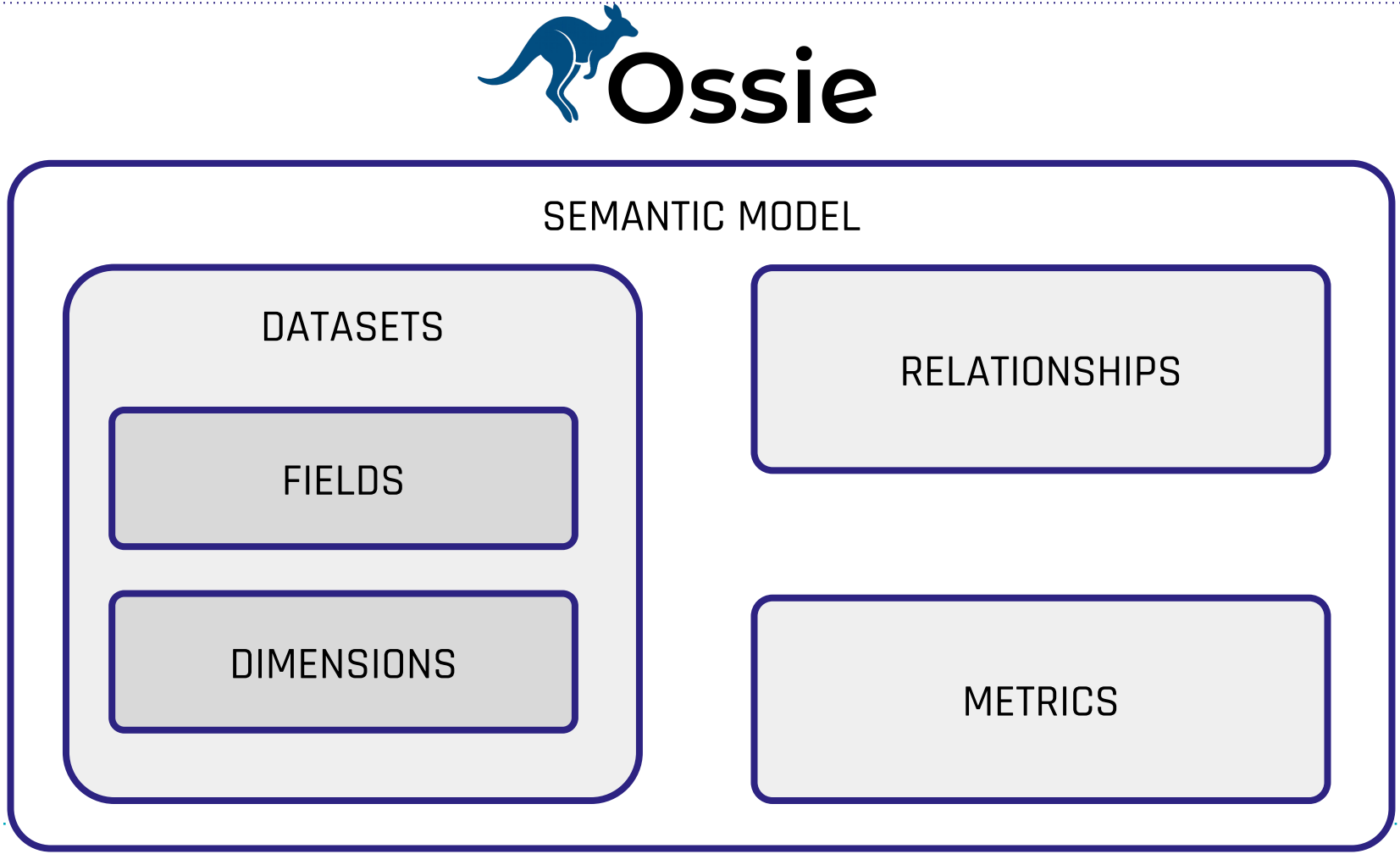
Read It Here For Free!

THE SEMANTIC REVOLUTION

OR

THE BIGGEST VENDOR-LOCK-IN-LURE EVER?




Ossie
SEMANTIC MODEL
DATASETS
FIELDS
DIMENSIONS
RELATIONSHIPS
METRICS




```yaml
semantic_model:
  - name: ecommerce_analytics
    description: Sales and customer analytics
    ai_context:
      instructions: "Use for sales analysis"

    datasets:
      - name: orders
        source: sales.public.orders
        primary_key: [order_id]
        fields:
          - name: order_date
            dimension:
              is_time: true

    metrics:
      - name: total_revenue
        expression:
          dialects:
            - dialect: ANSI_SQL
              expression: SUM(orders.amount)
```

DID I JUST SHOW YOU HOW TO KILL MY JOB?



SCALEFREE

THANK YOU FOR YOUR ATTENTION!

QUESTIONS?



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linkedin.com/in/tim-kirschke

DATA DREAMLAND 2026

UNLOCK THE POWER OF DATA- DRIVEN BUSINESS

NOVEMBER 26TH, 2026 - NOVOTEL HANNOVER

- Data Vault 2.1
- Data Governance & Security
- Digital Transformation & Solving Big Data Challenges
- Data Strategies such as Data Mesh
- Generative AI & Machine Learning
- Business Intelligence & Data Analytics

GET MY TICKET

POWERED BY SCALEFREE