

# The Knowledge Graph Explosion

**Dr. Maya Natarajan**  
Sr. Director, Knowledge Graphs

# 88%

CXOs believe knowledge graphs will significantly improve bottom line

*Pulse Survey, 2020*

# Two-thirds


of Neo4j customers have implemented knowledge graphs

*Neo4j Customer Segmentation Analysis, 2020*



*A small sample of Neo4j Knowledge Graph EMEA Customers*

A knowledge graph is an  
**interconnected** dataset  
**enriched with meaning** so we  
can **reason** about the  
underlying data **and use** it  
confidently for complex  
decision-making.



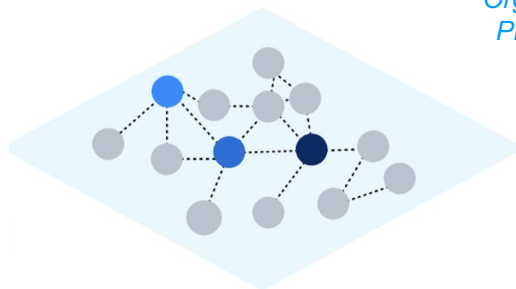
# Driving Intelligence into Data with Knowledge Graphs



**Data**



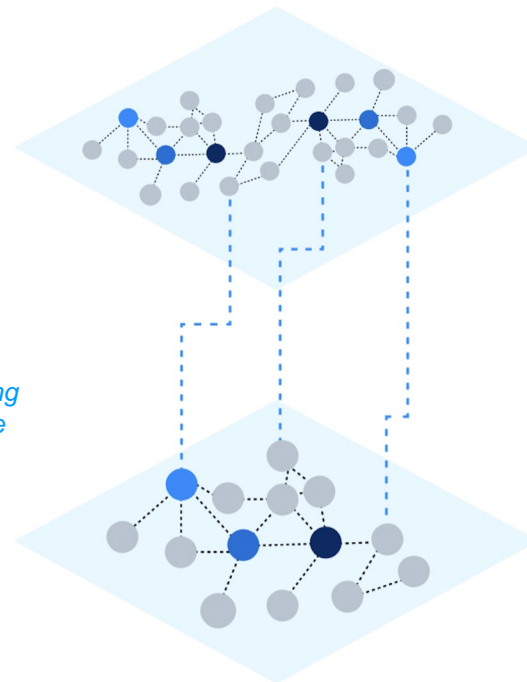
*Relationships*



**Graph**  
**Dynamic** Context

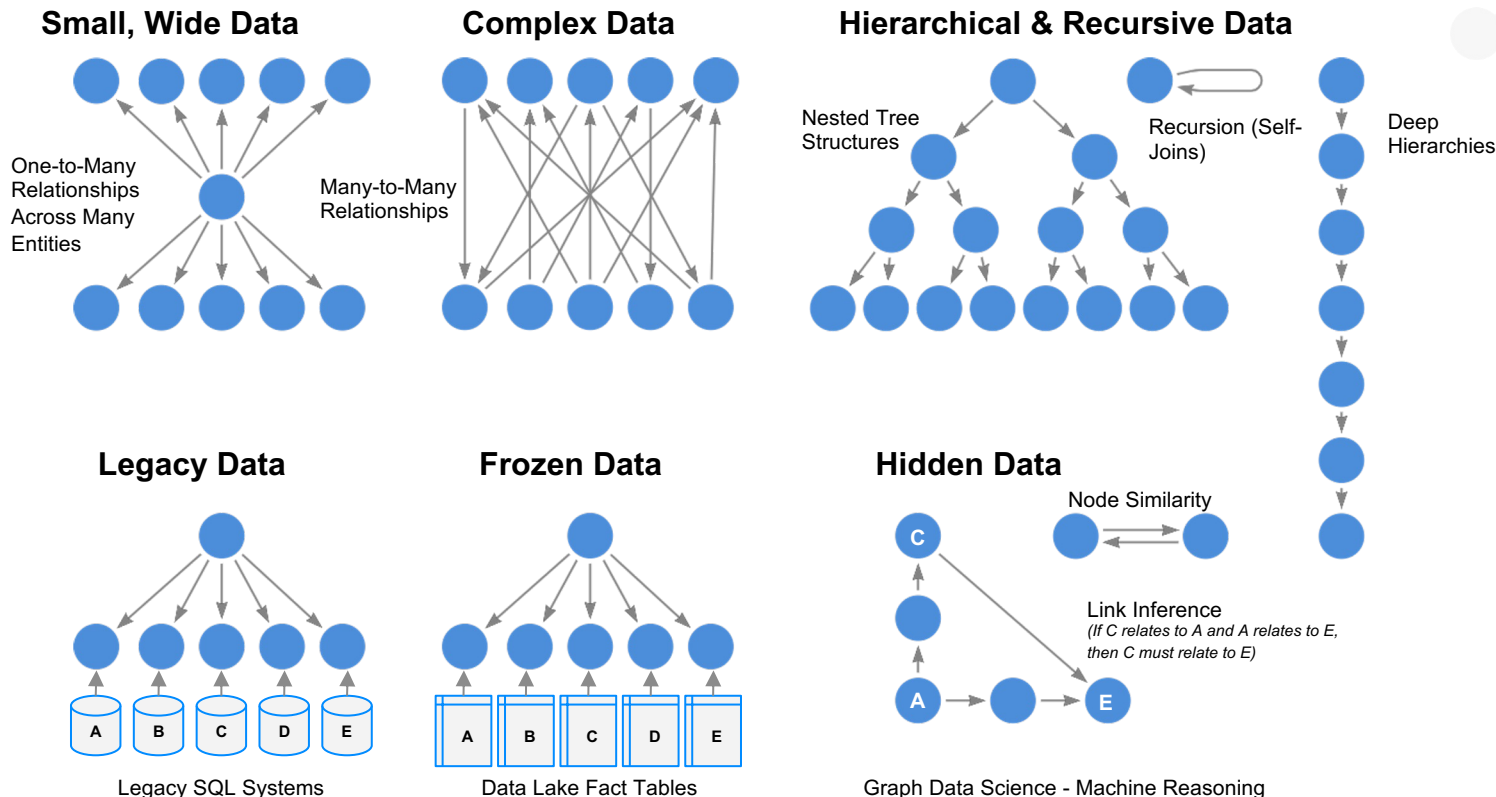


*Organizing  
Principle*

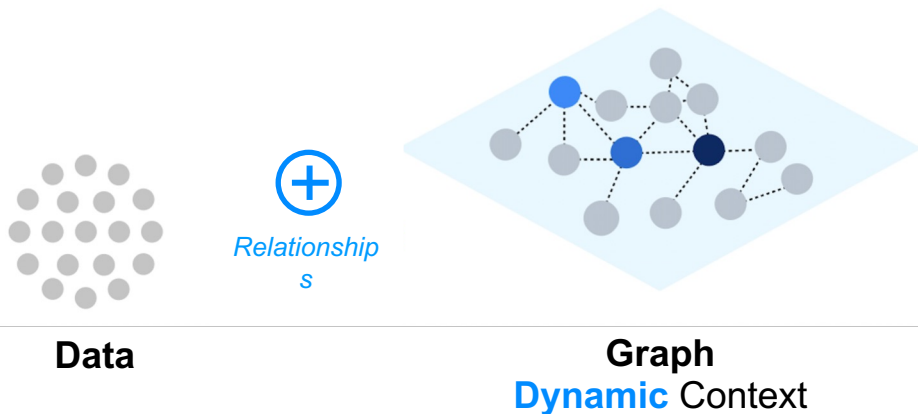


**Knowledge Graph**  
**Deep Dynamic** Context

# Data Comes in Many Shapes & Sizes



# Driving Intelligence into Data with Knowledge Graphs



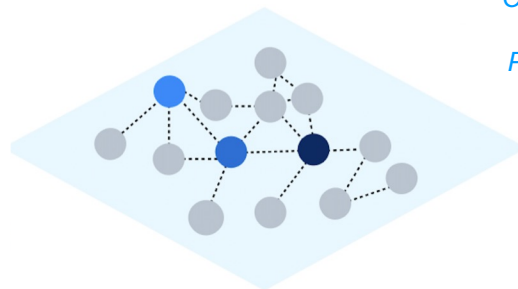
# Driving Intelligence into Data with Knowledge Graphs



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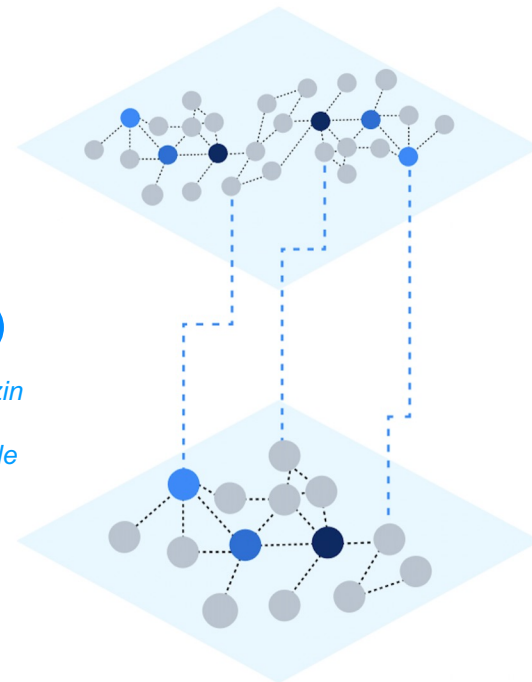
*Relationships*



**Graph**  
**Dynamic** Context



*Organizing Principle*



**Knowledge Graph**  
**Deep Dynamic** Context

# What is Semantics?

Controlled Vocabularies

Synonym Rings

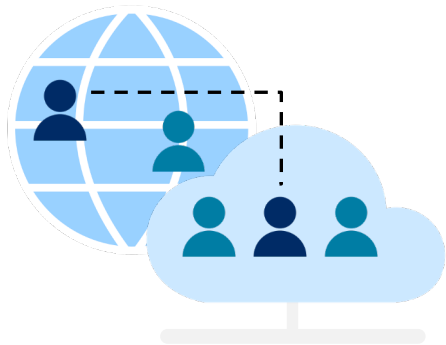
Taxonomy

Thesaurus

Ontology

C O M P L E X I T Y

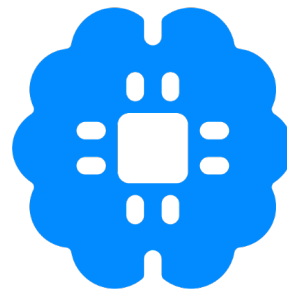
Entity Resolution  
& Analysis



Classification  
& Tagging



Artificial  
Intelligence





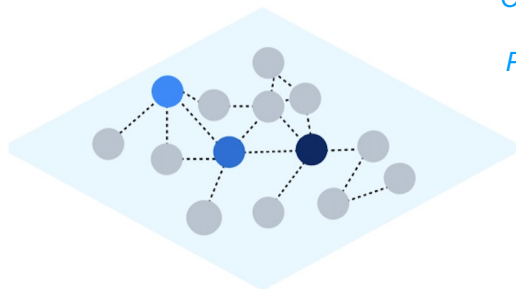
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**Data**



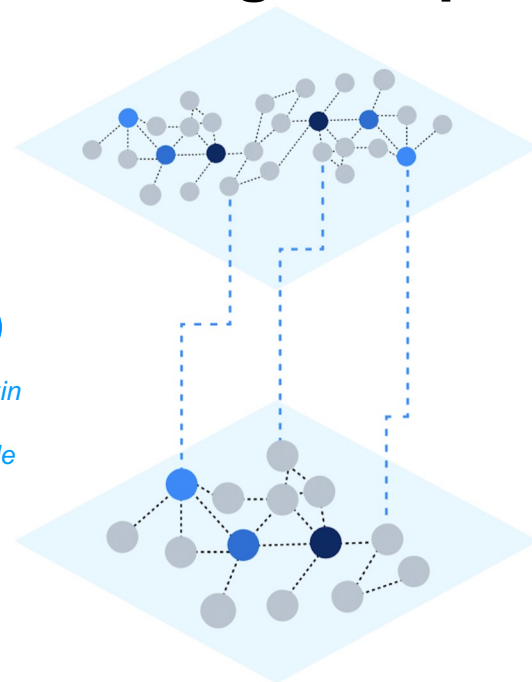
*Relationships*



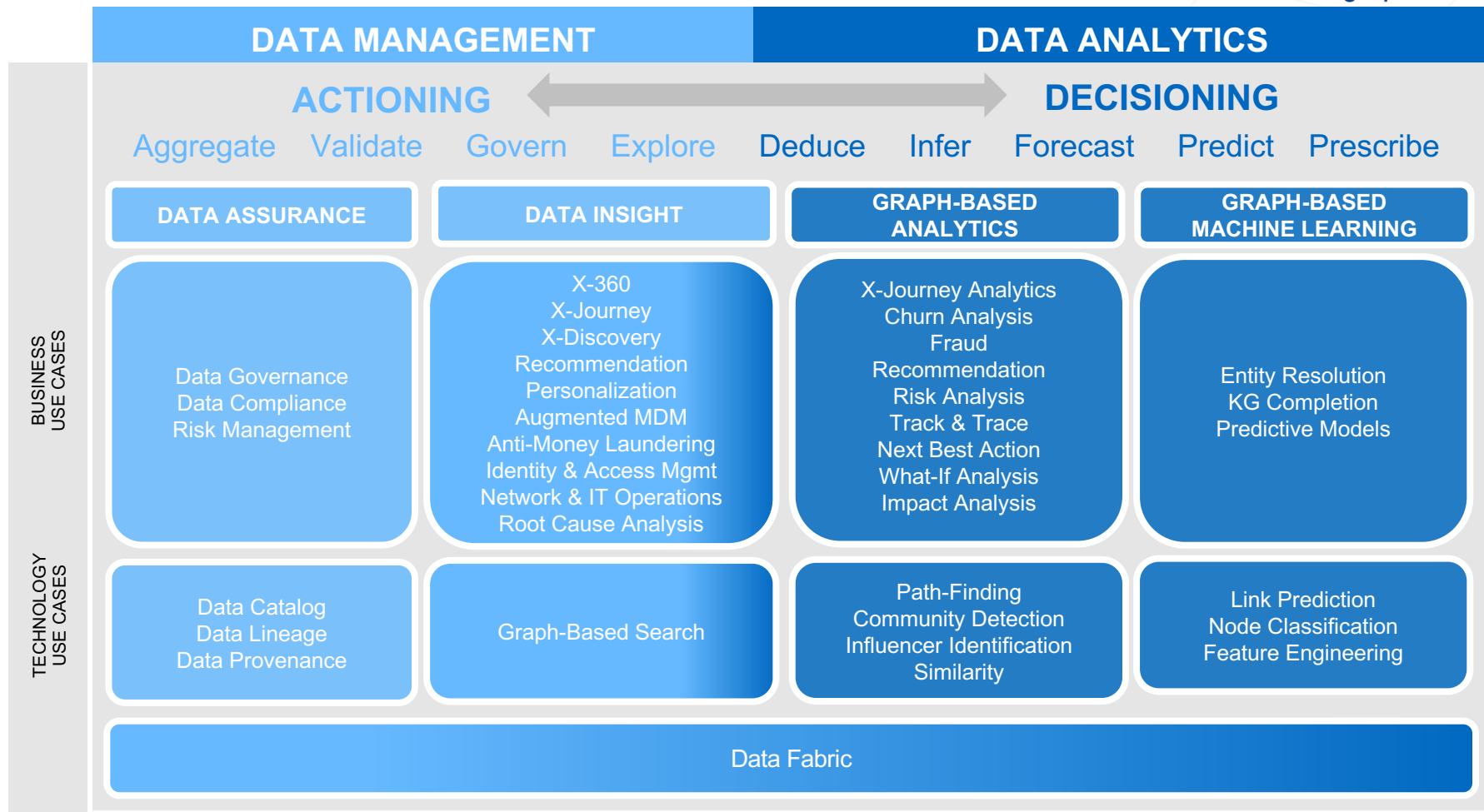
**Graph**  
**Dynamic** Context

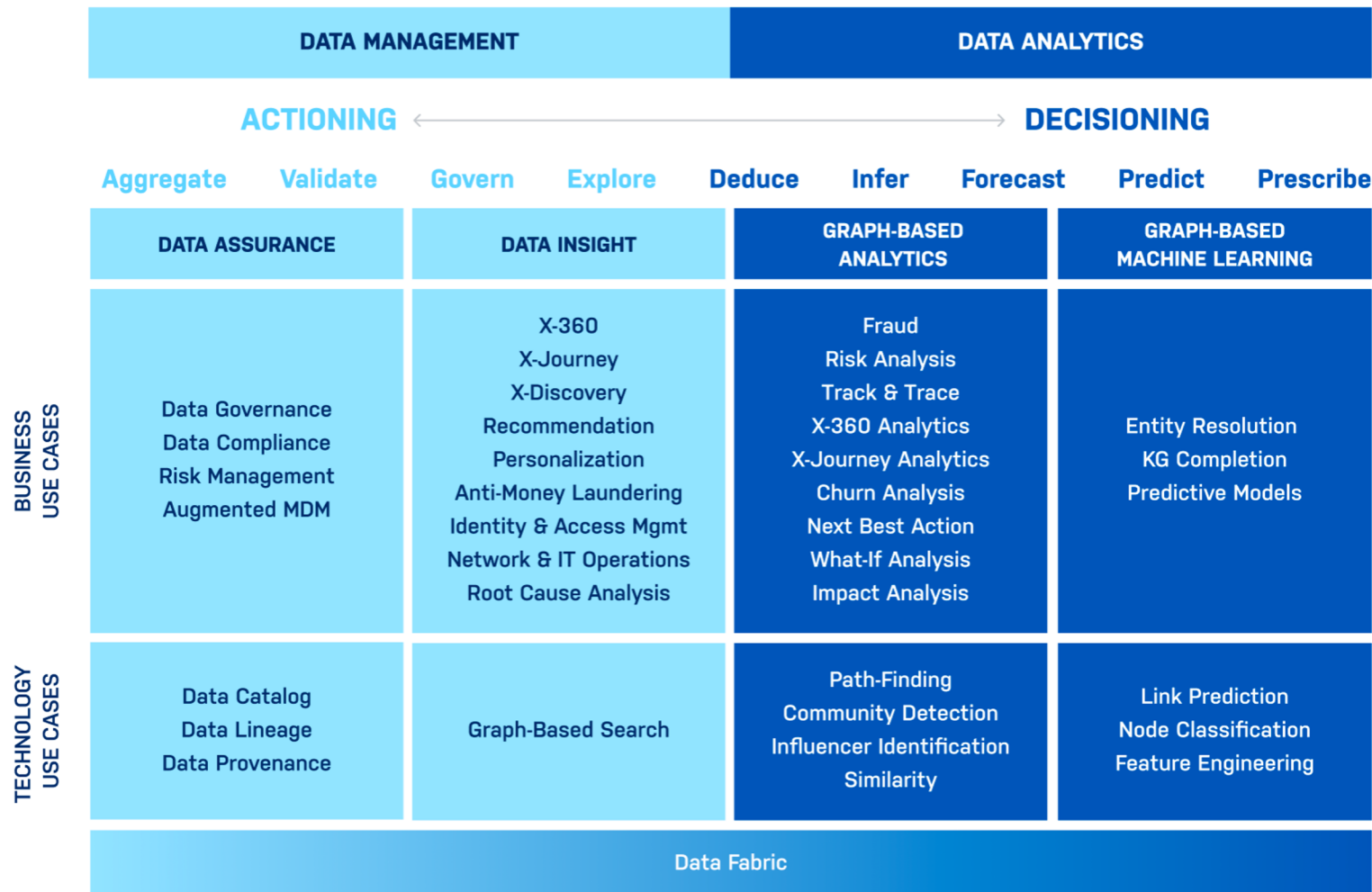


*Organizing  
Principle*



**Knowledge Graph**  
**Deep Dynamic** Context

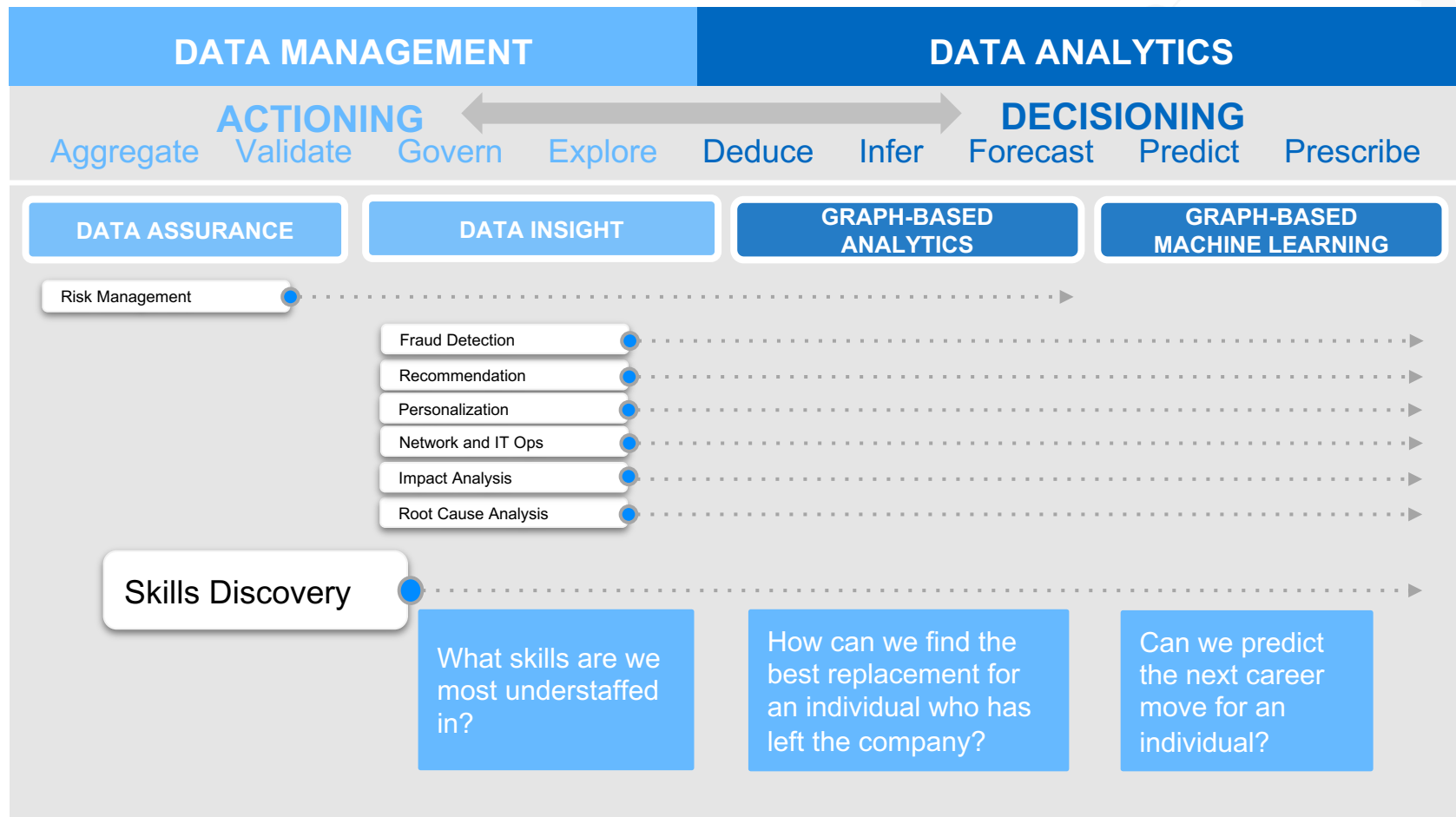




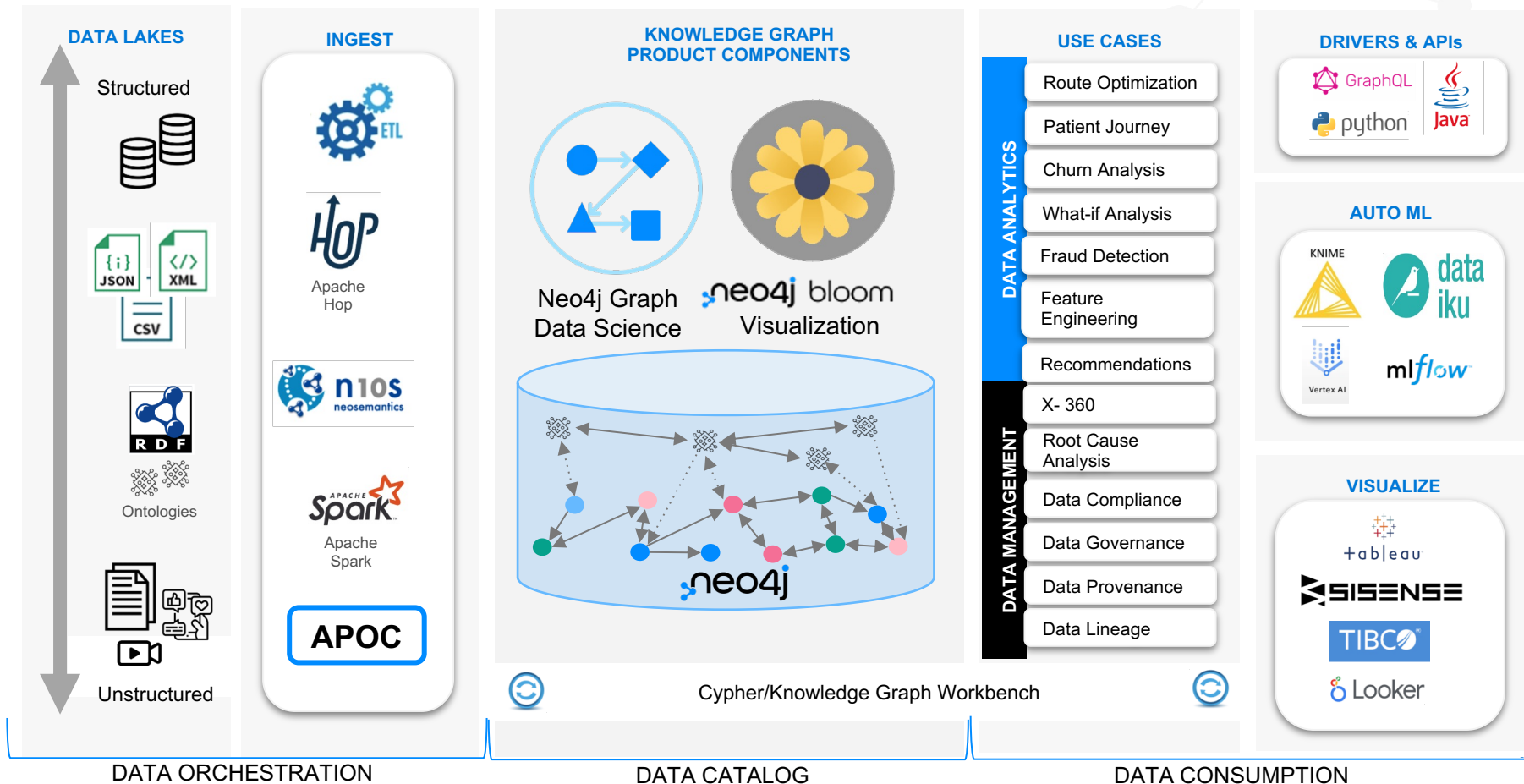
BUSINESS  
USE CASES

TECHNOLOGY  
USE CASES

# Graph Analytics Power Knowledge Graphs



# Knowledge Graphs Connect the Ecosystem



# Putting Knowledge Graphs to Work in EMEA

## EL Corte Inglés Recommendations



- Challenge: **Existing solution could not offer** real-time recommendations
- Solution: **Neo4j Knowledge Graph**
- **1.5M promotions/day** totally transforming company's real-time promotion engine



## Zurich Insurance Fraud Detection



- Challenge: Needed a **quick way to identify fraud** in a flood of automatically generated alerts.
- Solution: **Neo4j Knowledge Graph**
- **50,000 hours/ year** of investigators' time saved



## Deutsche Bahn Track & Trace



- Challenge: **Legacy technology could not** take dependencies into account to detect and analyze train journeys
- Solution: **Neo4j Knowledge Graph**
- **Identified bottlenecks and heavily used track sections and best paths based on distance, cost and train suitability**



# Thank You!



## graphsummit

Contact us at  
[sales@neo4j.com](mailto:sales@neo4j.com)

# Resources

## Graph Resources

- Neo4j Knowledge Graph Homepage: [neo4j.com/knowledge-graph](https://neo4j.com/knowledge-graph)
- White Paper: [From Graphs to Knowledge Graphs: A Short Journey to Unlimited Insights](#)
- Video: Advantages of Graph Technology | <https://neo4j.com/videos/why-graph/>
- Case Study: UBS | <https://neo4j.com/case-studies/ubs-case-study/>
- Case Study: Meredith Corporation | <https://neo4j.com/users/meredith-corporation/>

## Neo4j Bookshelf

- Graph Databases For Dummies | <https://neo4j.com/graph-databases-for-dummies/>
- Graph Data Science For Dummies | <https://neo4j.com/graph-data-science-for-dummies/>
- O'Reilly Knowledge Graphs: Data in Context for Responsive Businesses | <https://neo4j.com/knowledge-graphs-data-in-context-for-responsive-businesses/>

