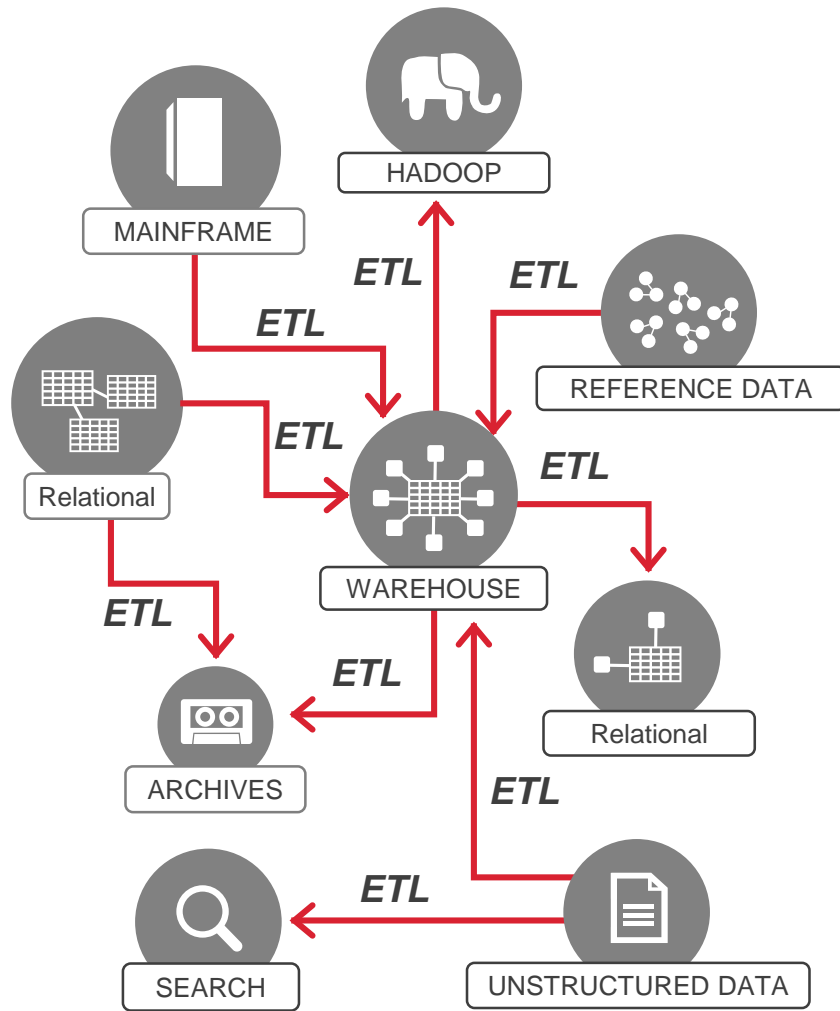# MiFID II:
It's About the Data, Not the Reporting

Daniel Roberts, Principal Sales Engineer, MarkLogic
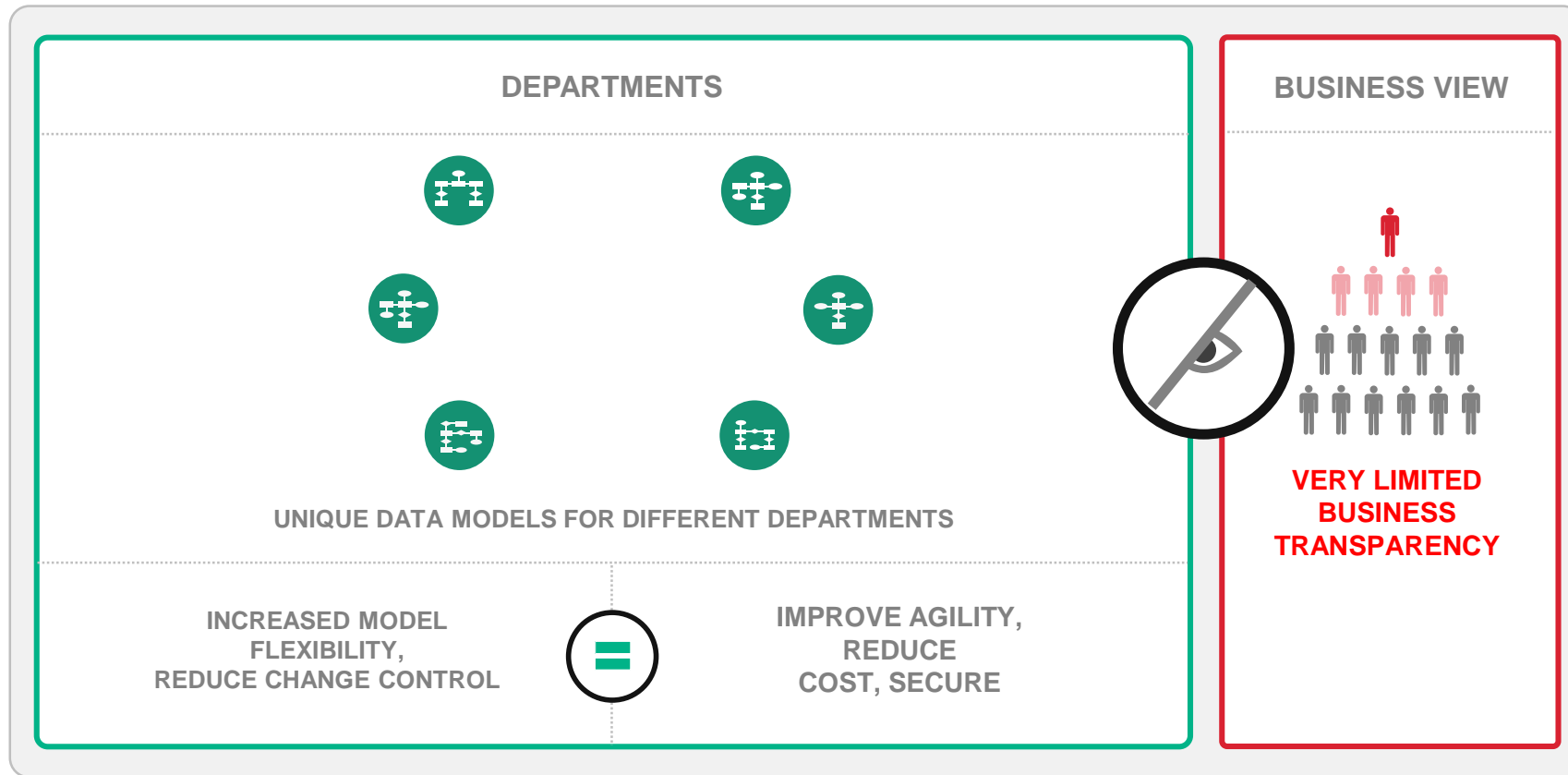
20,000

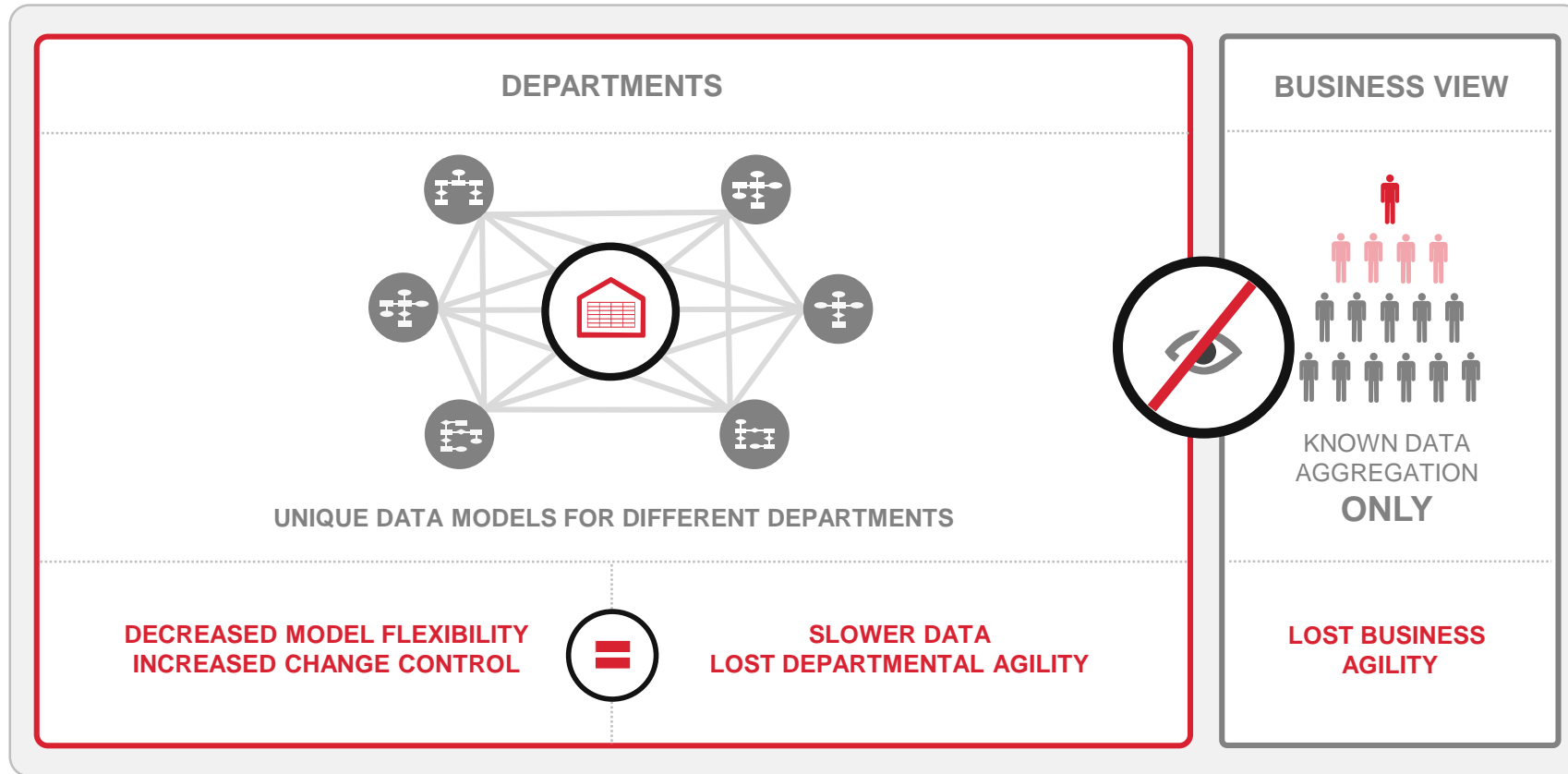UNFORTUNATE REALITY

Proliferation of Solutions

- "YADS" – Yet Another Data silo
  - Build vs Buy
- Years in the making
- Each solution is another silo
- *Data is* massively fragmented
- Each new solution makes the problem worse

GRC
Traditional Solutions Are Limited & Costly

DEPARTMENTS

BUSINESS VIEW

UNIQUE DATA MODELS FOR DIFFERENT DEPARTMENTS

KNOWN DATA
AGGREGATION
ONLY

DECREASED MODEL FLEXIBILITY
INCREASED CHANGE CONTROL

SLOWER DATA
LOST DEPARTMENTAL AGILITY
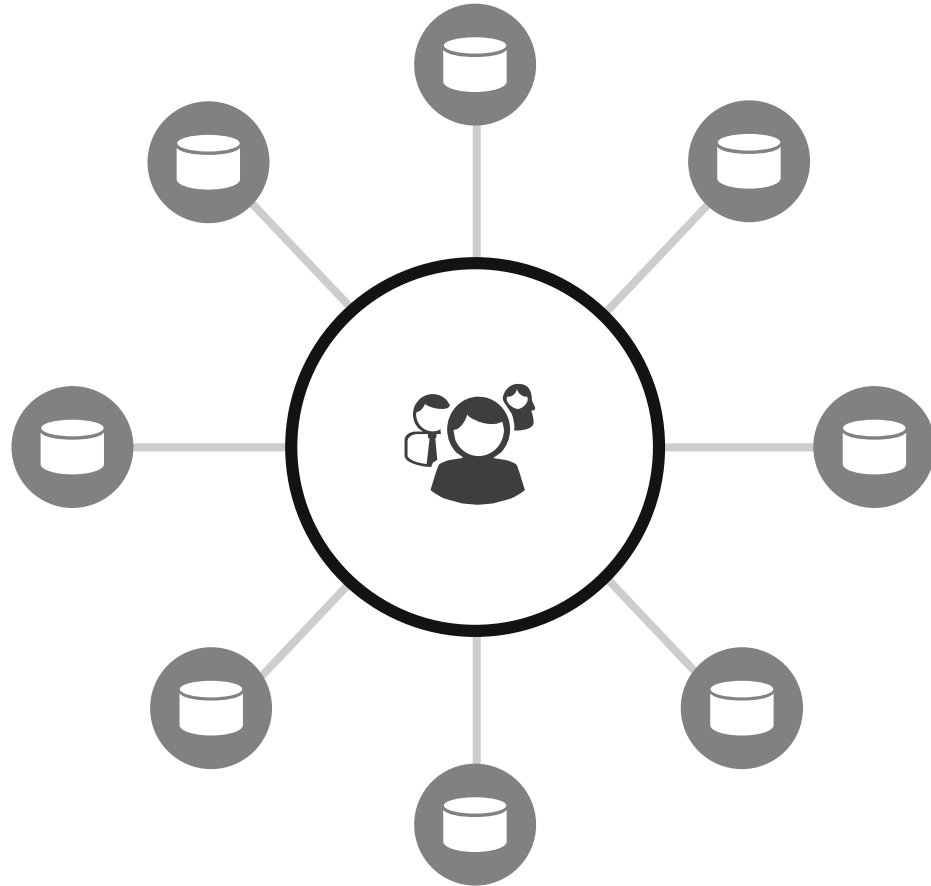
LOST BUSINESS
AGILITY

MarkLogic®

GRC
Tool and Infrastructure Proliferation

How will your environment fare in the evolving regulatory landscape?

What do we need?

REGULATORY REPORTING

Requires a Consolidated View of the **Data**

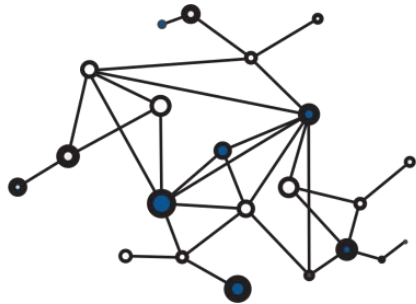*And, the business also requires this*

Business Insight and Regulatory Insight

- Cross functional aggregation

- Converged data models – *this is hard in relational*

- Hard dates for delivery – *very visible failure*

REGULATOR

POOR CROSS FUNCTIONAL OVERSIGHT

COMPLETE, ACCURATE, TIMELY CROSS FUNCTIONAL VIEW

```
counterpartyid
counter_party
cp_id
```



```
counterpartyid  :sameAs counter_party
counter_party   :sameAs cp_id
cp_id           :sameAs counterpartyid
```
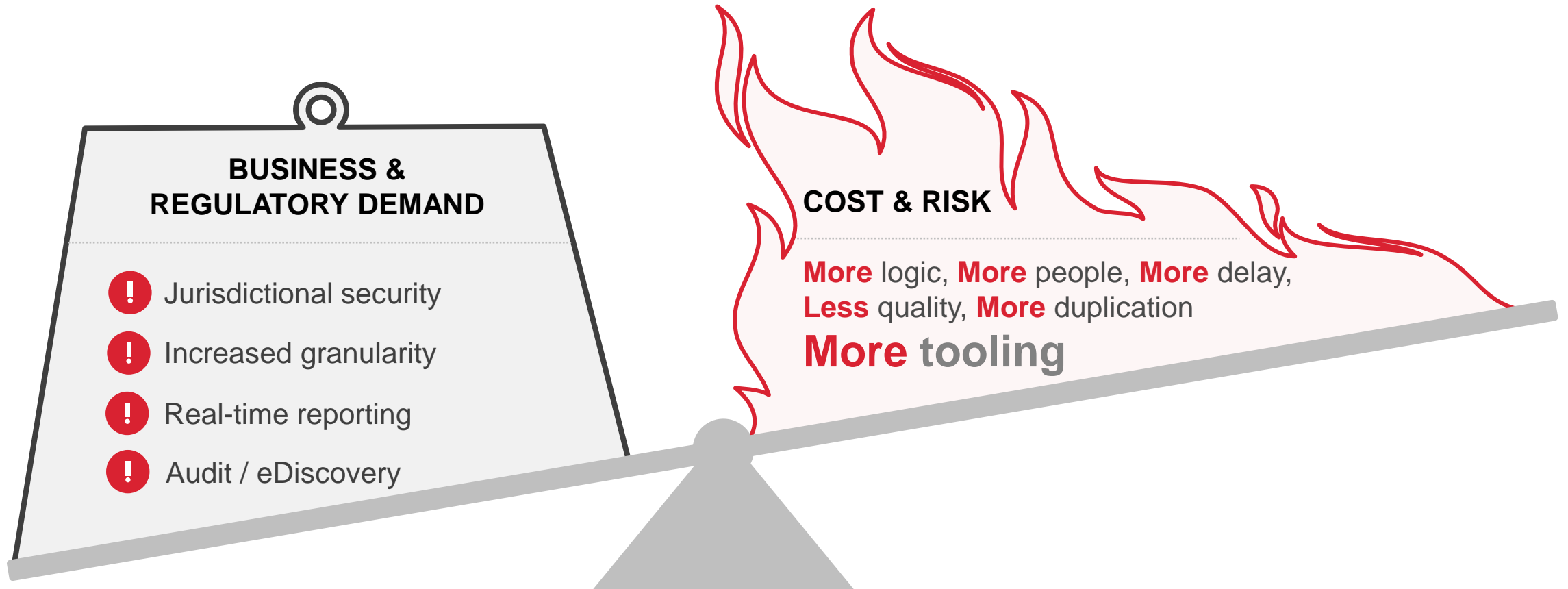
Governance and Regulation

- Effective data governance workflow process

- Organisational wide ontology

- Accessible organisation-wide catalog

- Semantic representation leads to semantic integration therefore simplified data representation and consolidation

- Simplified regulatory reporting

GRC
The Evolving Data Landscape

BUSINESS & REGULATORY DEMAND

- ❗ Jurisdictional security
- ❗ Increased granularity
- ❗ Real-time reporting
- ❗ Audit / eDiscovery

COST & RISK

More logic, **More** people, **More** delay, **Less** quality, **More** duplication
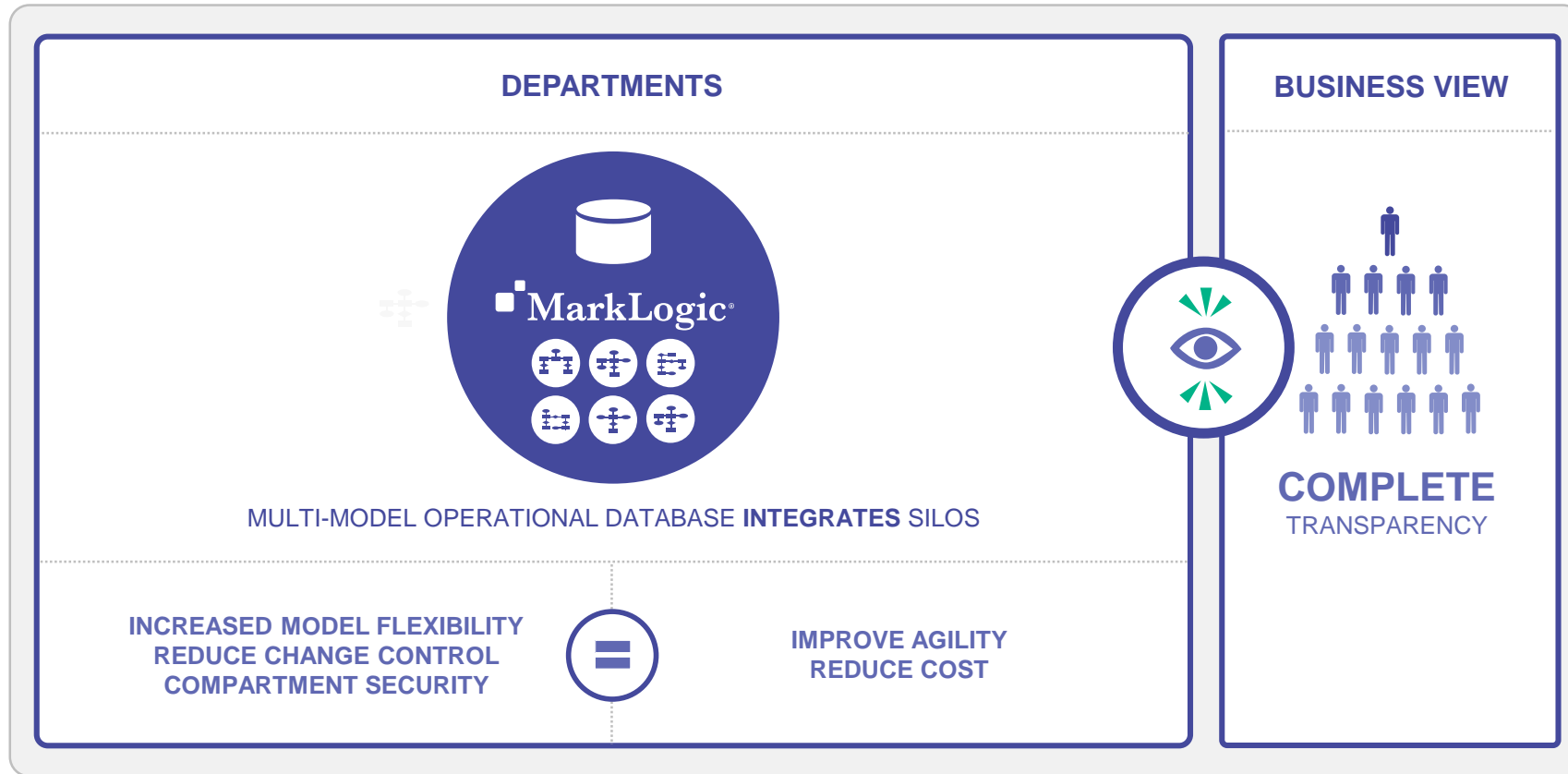**More** tooling

How Can I Solve this Problem?

And make a strategic leap?

GRC

Multi-Model Database: **Complete** Transparency

DEPARTMENTS

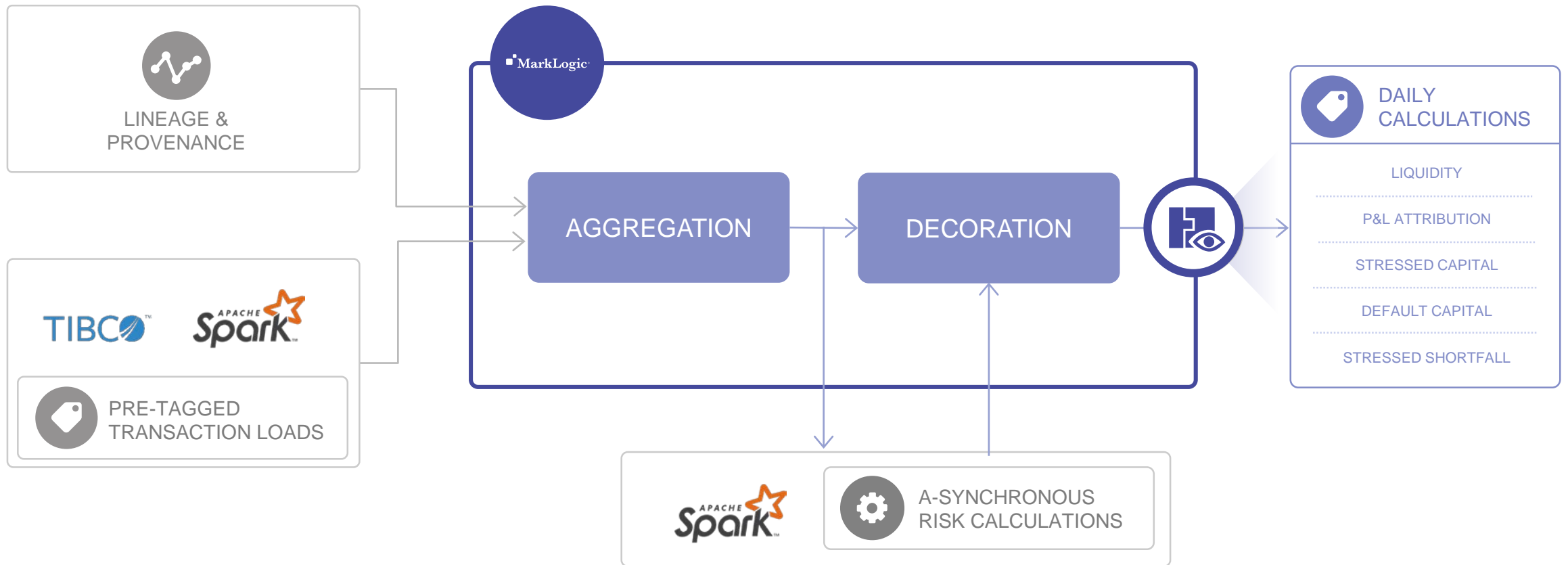**BUSINESS VIEW**

MULTI-MODEL OPERATIONAL DATABASE **INTEGRATES** SILOS

COMPLETE
TRANSPARENCY

INCREASED MODEL FLEXIBILITY
REDUCE CHANGE CONTROL
COMPARTMENT SECURITY

=

IMPROVE AGILITY
REDUCE COST

GRC

Single Regulatory Reporting Capability

UNSTRUCTURED SOURCES

TRADE SOURCES

REFERENCE DATA SOURCES

TRADE VALIDATION & DUPLICATE CHECKS

REFERENCE DATA VALIDATION

MATERIALISATION OF COMPLEX ATTRIBUTES

MATERIALISATION OF CORE ATTRIBUTES

METADATA ENVELOPE / RDF

COMPLEX ATTRIBUTES

CORE ATTRIBUTES

DYNAMIC ATTRIBUTES

(Original Trade) Ingested raw form

REPORTING & DATA EXPLORATION MODULES

DEPARTMENTAL VIEWS / ONTOLOGIES

BUSINESS RULES

EXTERNAL METADATA (RDF)

SYSTEM ATTRIBUTES

PROVENANCE

URI

REAL-TIME & SCHEDULED OUTPUTS

STATUS

EXCEPTIONS

SYSTEM OPTIMISATIONS

BUSINESS & DEPARTMENTAL

AUDIT | E-DISCOVERY

AD-HOC | MONITORING

REGULATORY

RISK | EXECUTION

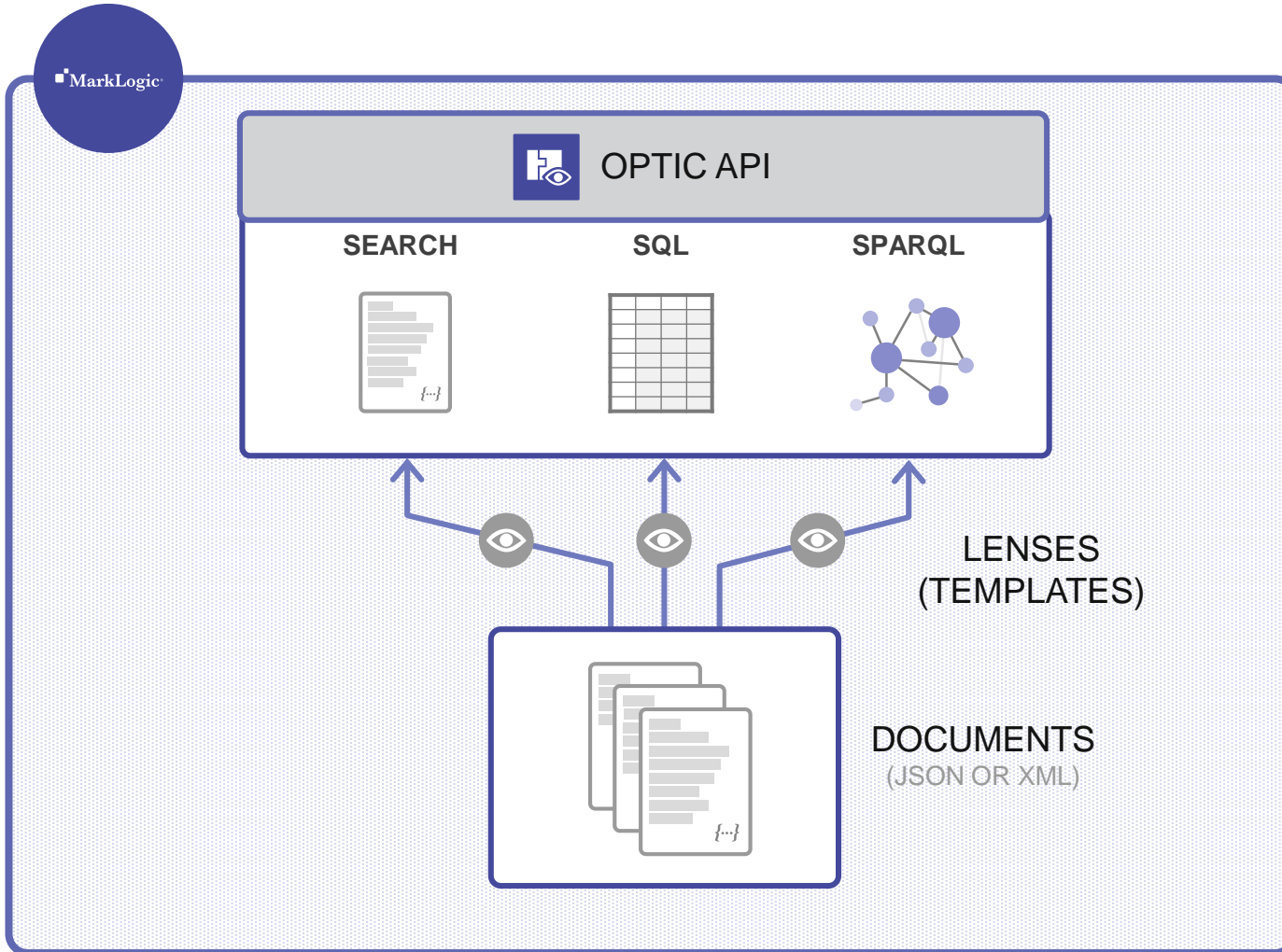TRANSACTION | COMPLIANCE

LENSES
(TEMPLATES)

DOCUMENTS
(JSON OR XML)

Multiple Functional Lenses

- Semantic metadata mapping

- Lenses rapidly evolve over time

- They are functionality independent

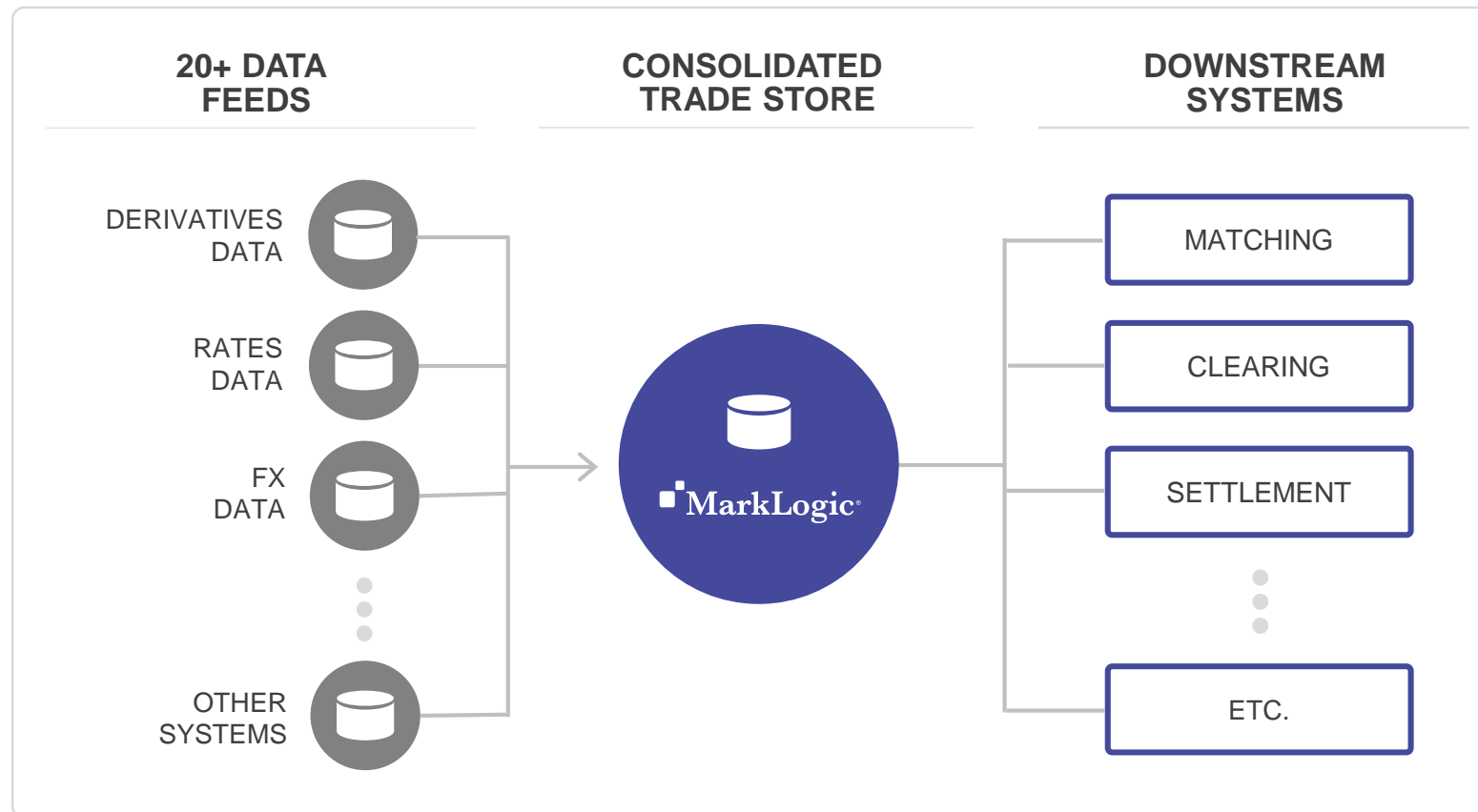- Commonality

MarkLogic 9 – Single Data Set – Multiple Views

BENEFITS

- Single congruent view of data
- Multiple view of the same data
- Data fragmentation eliminated

Case Studies

Top 5 Bank – Derivatives Core Processing Platform (DCPP)

Integrated Trade Data Hub

20+ DATA FEEDS

- DERIVATIVES DATA
- RATES DATA
- FX DATA
- OTHER SYSTEMS

CONSOLIDATED TRADE STORE

MarkLogic®

DOWNSTREAM SYSTEMS

- MATCHING
- CLEARING
- SETTLEMENT
- ETC.

WHY MARKLOGIC?

- Sybase data model too rigid
- Eliminate long, costly ETL cycles
- Flexibility for future changes
- Cost and timeline constraints
- Enterprise requirements

Top 5 Ba... ...P)

Integrated Tra...

💡 The Results

- **Flexible** – Manages complex data ingestion, complex output

- **High Performance** – 1,600+ requests per second

- **Improved Risk Management –** Consolidated view

- **Enterprise-Grade** – ACID Transactions, Security, HA/DR

- **Cost-efficient** – 1 database, not 20. 1 DBA, not 10.

"We needed to get away from relational… MarkLogic offered us horizontal scalability, the ability to just add more and not have do a big infrastructure replacement."
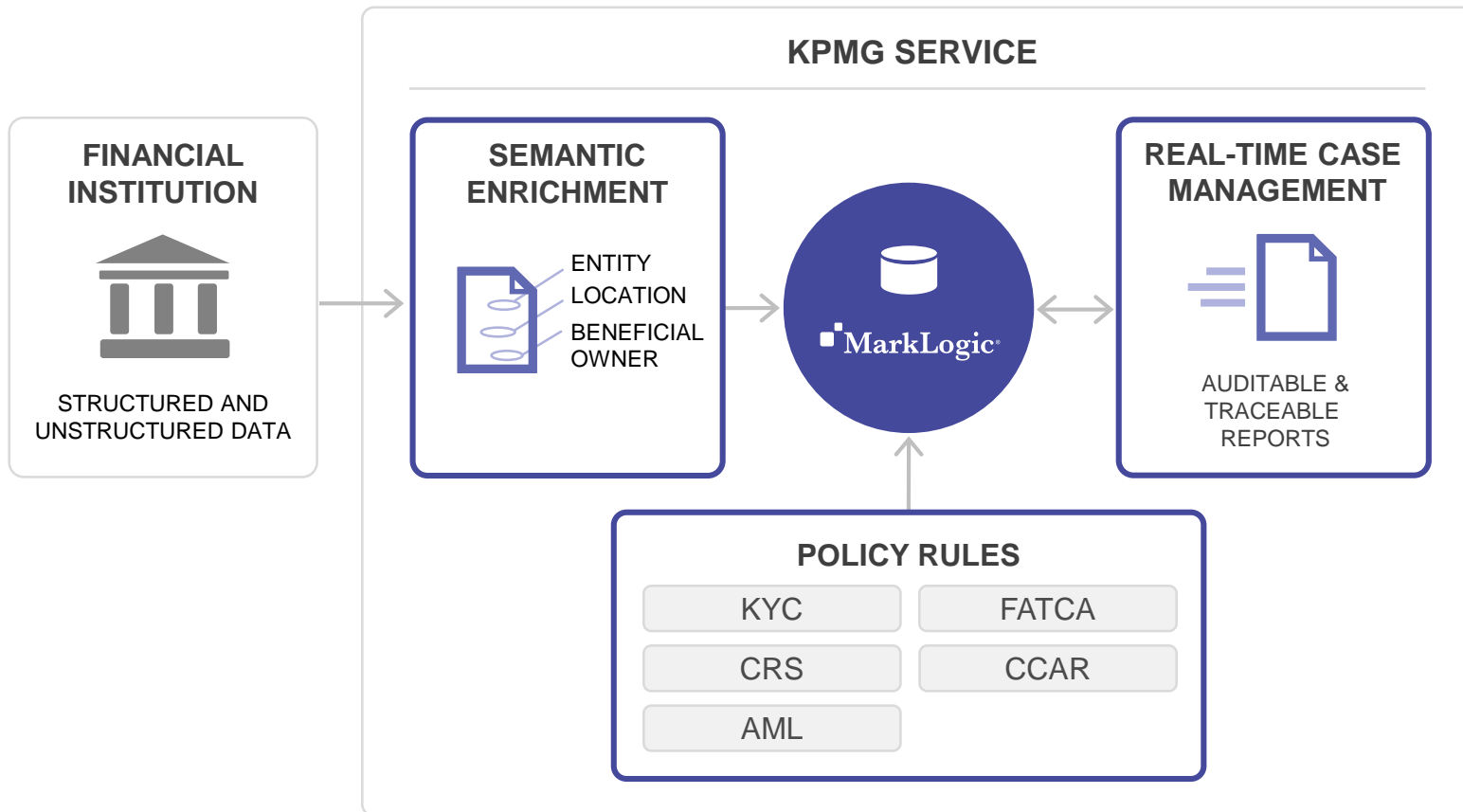
- CTO AT THE BANK

20+ DATA
FEEDS

DERIVATIVES
DATA

RATES
DATA

FX
DATA

OTHER
SYSTEMS

...IC?

...del too rigid

...costly ETL cycles

...ure changes

...e constraints

...rements

KPMG – Regulatory, Tax, and Reporting Compliance
Integrated and Enriched Client Financial, Risk, and Reference Data

KPMG SERVICE

FINANCIAL INSTITUTION

STRUCTURED AND UNSTRUCTURED DATA

SEMANTIC ENRICHMENT

ENTITY
LOCATION
BENEFICIAL OWNER

MarkLogic®

REAL-TIME CASE MANAGEMENT

AUDITABLE & TRACEABLE REPORTS

POLICY RULES

KYC	FATCA
CRS	CCAR
AML	

WHY MARKLOGIC?

- Ingestion of petabytes of structured and unstructured data
- Intelligent extraction of reference data from unstructured data
- Semantics-based analysis
- Auditable, traceable data

KPMG – Compliance

Integrated and

FINANCIAL INSTITUTION

STRUCTURED AND UNSTRUCTURED DATA

The Results

- **Smart** – Intelligent automation of complex manual processes

- **Flexible** – Extendable to support additional regulations

- **Cost-efficient** – Lower cost and lower risk

- **Regulatory-ready** – Comprehensive data governance

- **Success** – Improved compliance and customer experience

"We have MarkLogic at the center of everything we do... We can get order of magnitude reductions in the manual processes."

- MICHAEL HENRY, ADVISORY PRINCIPAL, KPMG

Key Takeaways

- Integrated, well-governed data:

  - Provides the basis for business requirements

  - Simplifies reporting and business insights

  - Avoids regulatory reporting challenges with MiFID II

Q&A

MarkLogic®