What is a Unified Analytics Framework & why should you care?

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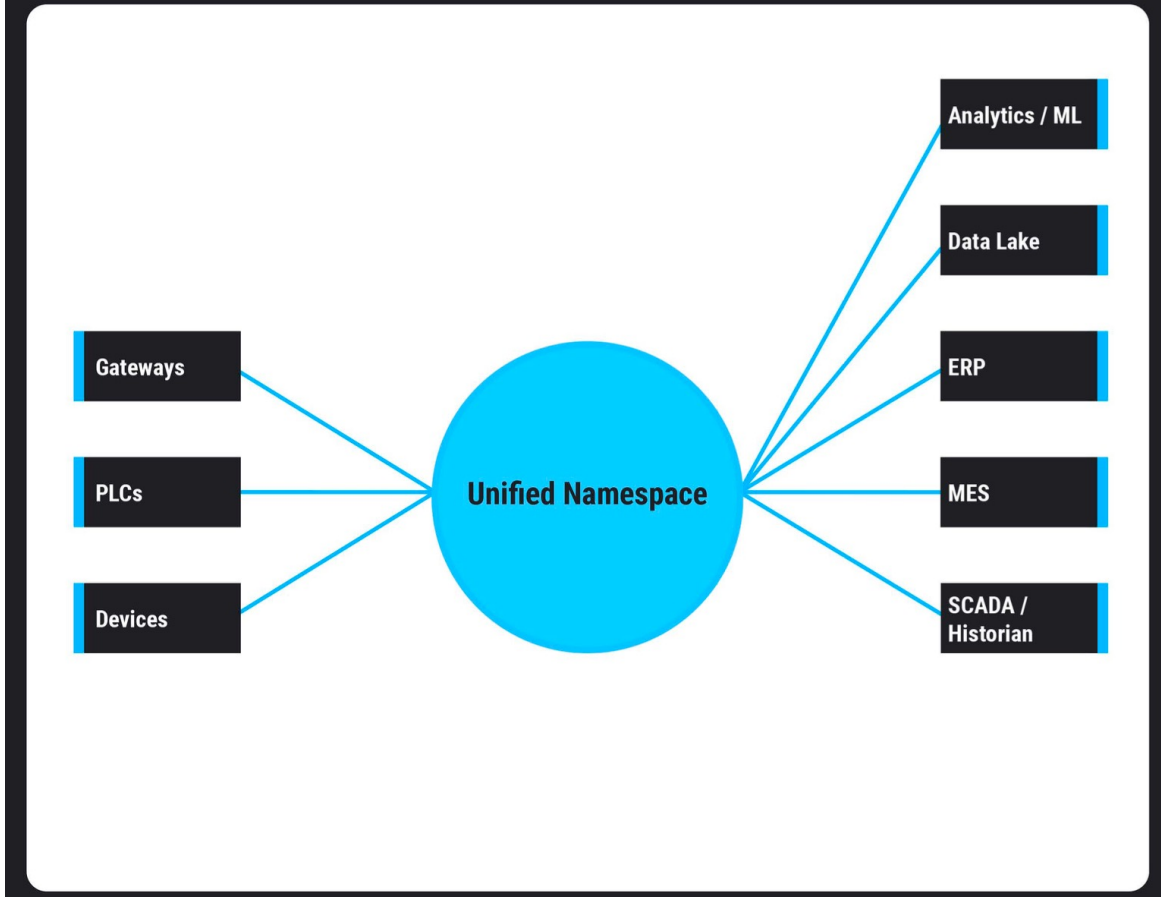
UAF - Why Should you care

IT'S ABOUT TIME



The Unified Namespace Advances Data Analytics

With the introduction of the Unified Namespace, systems are connected using a pub/sub architecture.

Realtime data is available to everyone and everything with minimal integration allowing for the beginning of our digital transformation.

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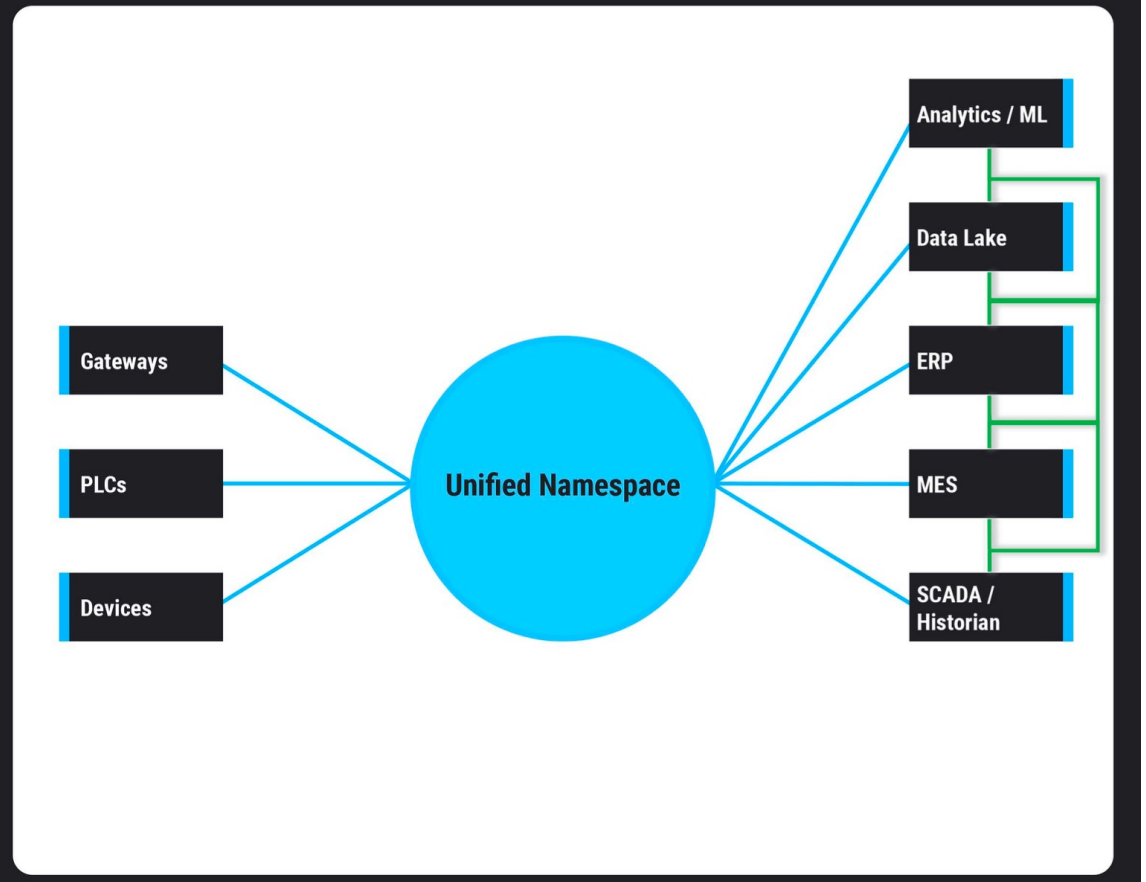

Historic Data Integration Creates Familiar Problems

Data analysis requires access to historical and transactional data sources, forcing us back towards traditional point-to-point integration.

Ideally, we would extend the UNS to include the management and pass through of these data queries.

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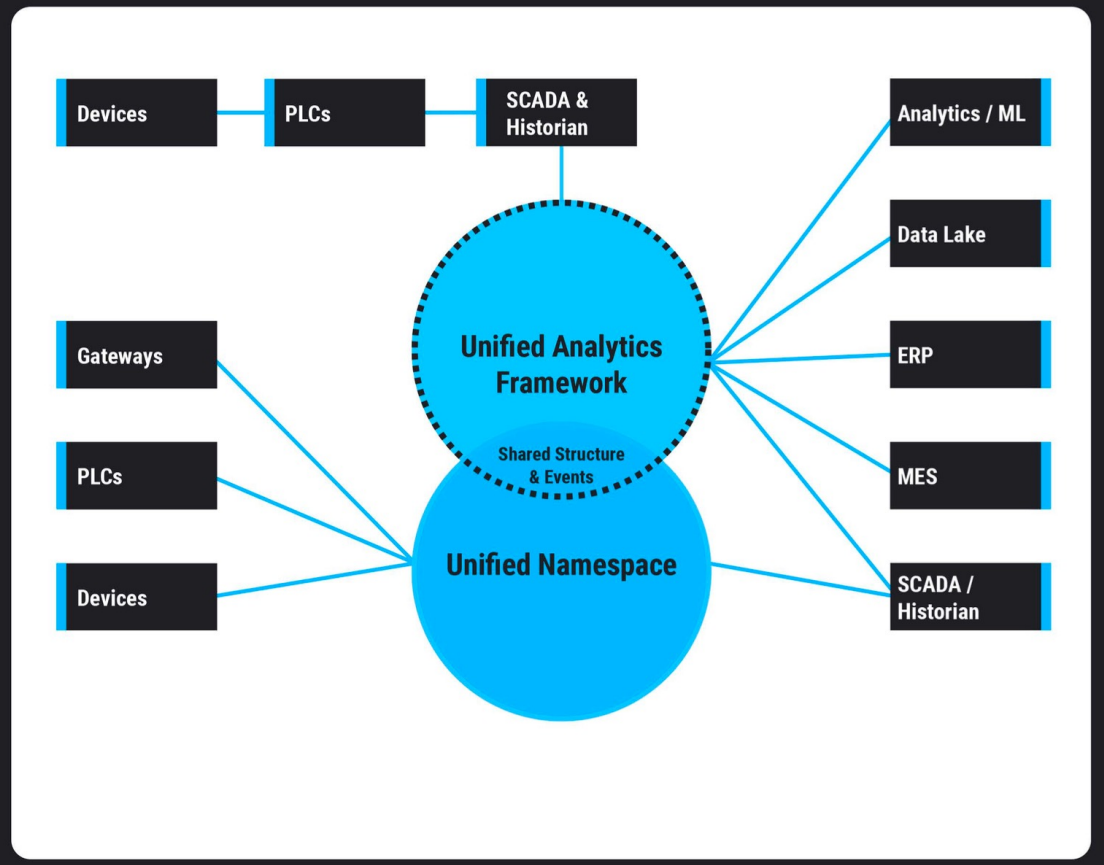


The Unified Analytics Framework, a New Approach

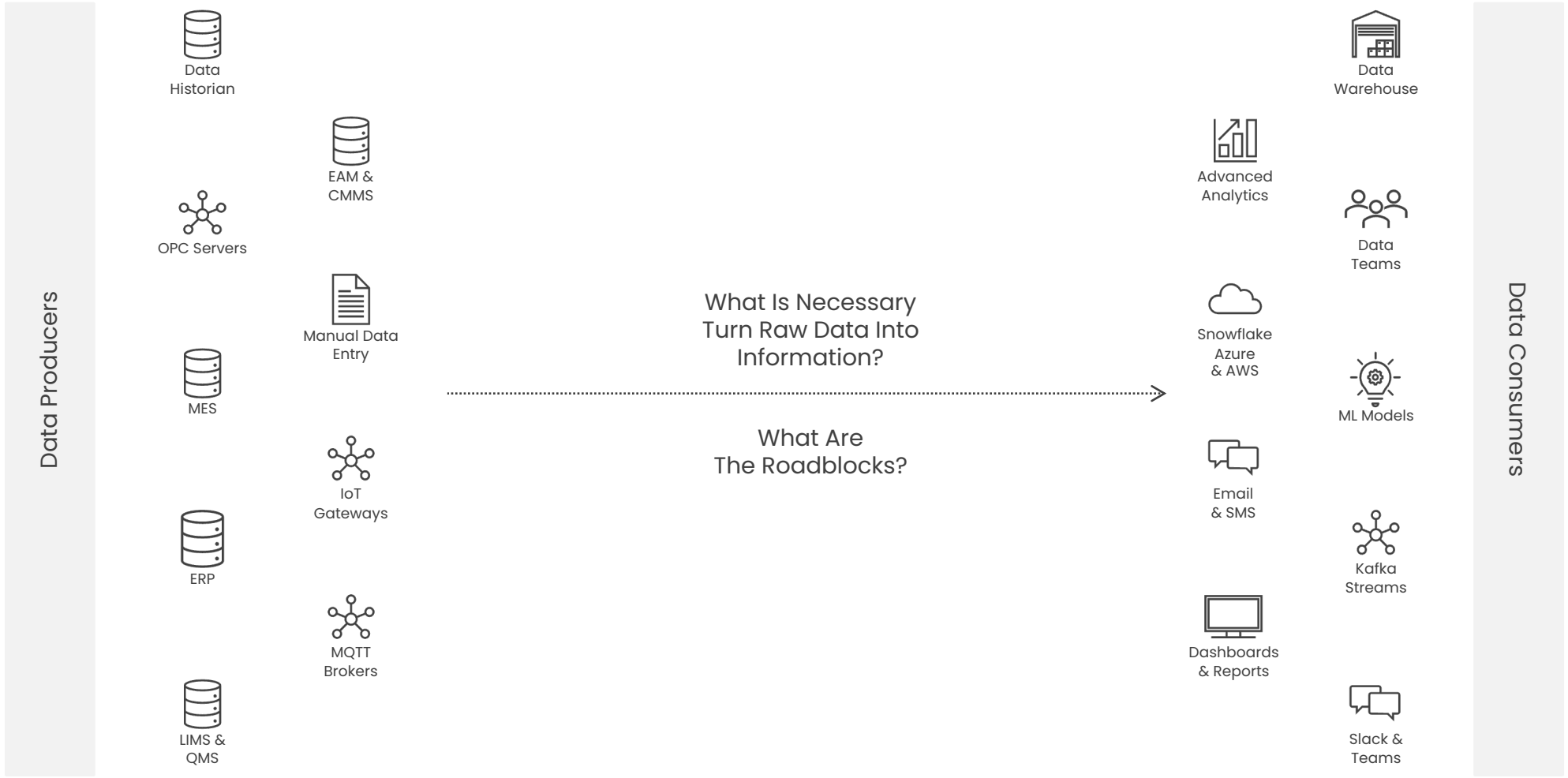
The Unified Analytics Framework (UAF) centralizes data analysis and provides analytics at scale.

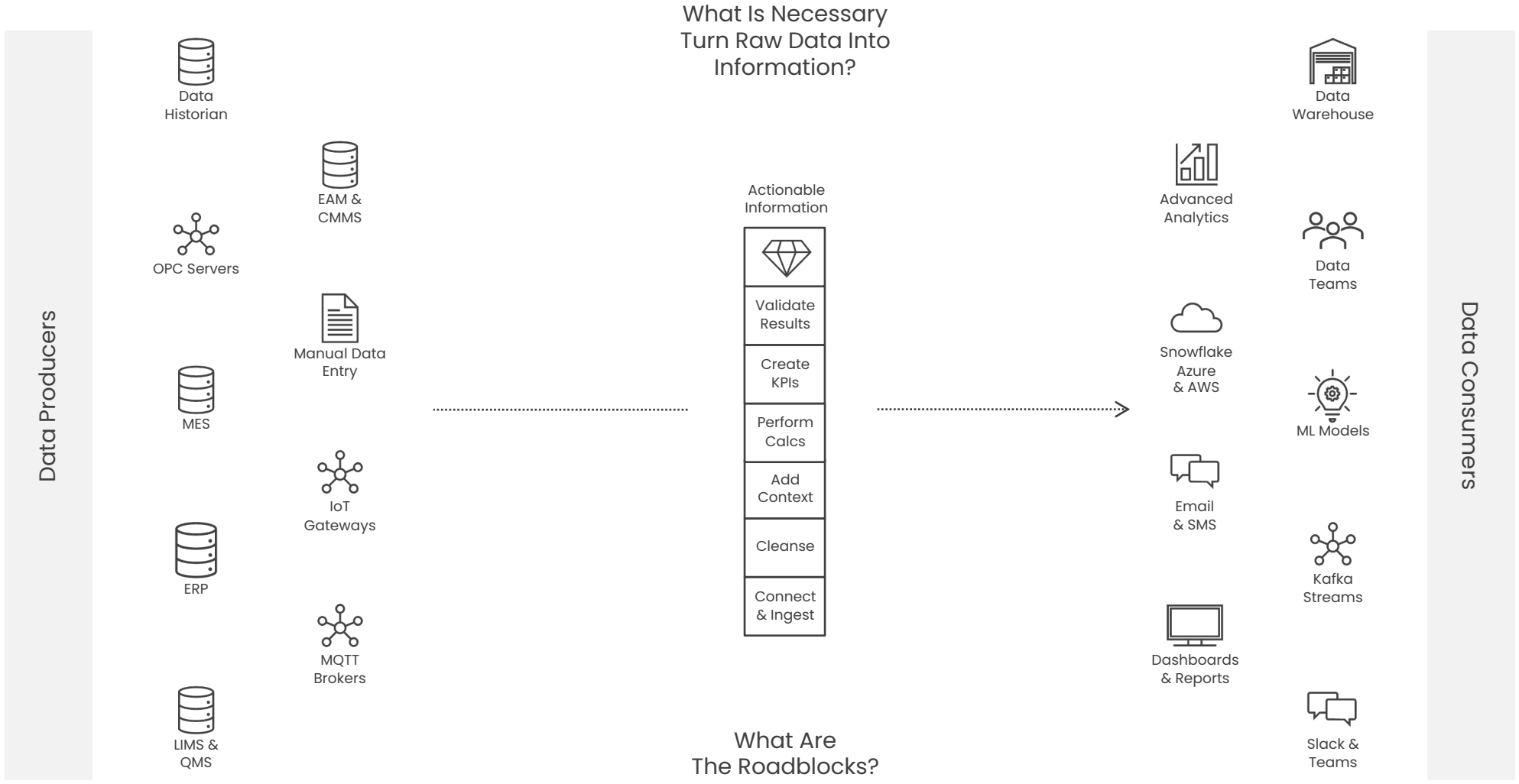
Working in parallel with the UNS, the UAF serves as an information gateway, providing historic data on query, centralizing data analytics efforts, and expanding the UNS to include brownfield and indiscriminate systems.

UAF HELPS YOUR DATA TELL A STORY

1. Determine true cost (labor, raw materials, utilities) in the current time window
2. Track unscheduled downtime, causation, frequency, and financial impact
3. Provide machine hours, cycle count, and anomalies to your maintenance team
4. Will The Boks or New Zealand win the World Cup
5. Tighter quality controls to ensure standards adherence and reduce waste
6. Calculate machine/equipment availability, performance, and even OEE
7. Production reports sliced by multiple calendar periods, process conditions, and production attributes
8. Drive your production/process/maintenance meetings with Flow dashboards and reporting (Bonus-- manual input to assist with shift handovers & future analysis)
9. Inter line/machine/site Short Interval Control and performance benchmarking

Why Are We Not Doing All Of This Already Across Our Entire Enterprise?


Data Producers
Data Historian
OPC Servers
MES
ERP
LIMS & QMS
EAM & CMMS
Manual Data Entry
IoT Gateways
MQTT Brokers
What Is Necessary Turn Raw Data Into Information?
What Are The Roadblocks?
Advanced Analytics
Snowflake Azure & AWS
Email & SMS
Dashboards & Reports
Data Warehouse
Data Teams
ML Models
Kafka Streams
Slack & Teams
Data Consumers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Actionable Information
Validate Results
Create KPIs
Perform Calcs
Add Context
Cleanse
Connect & Ingest
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What Are
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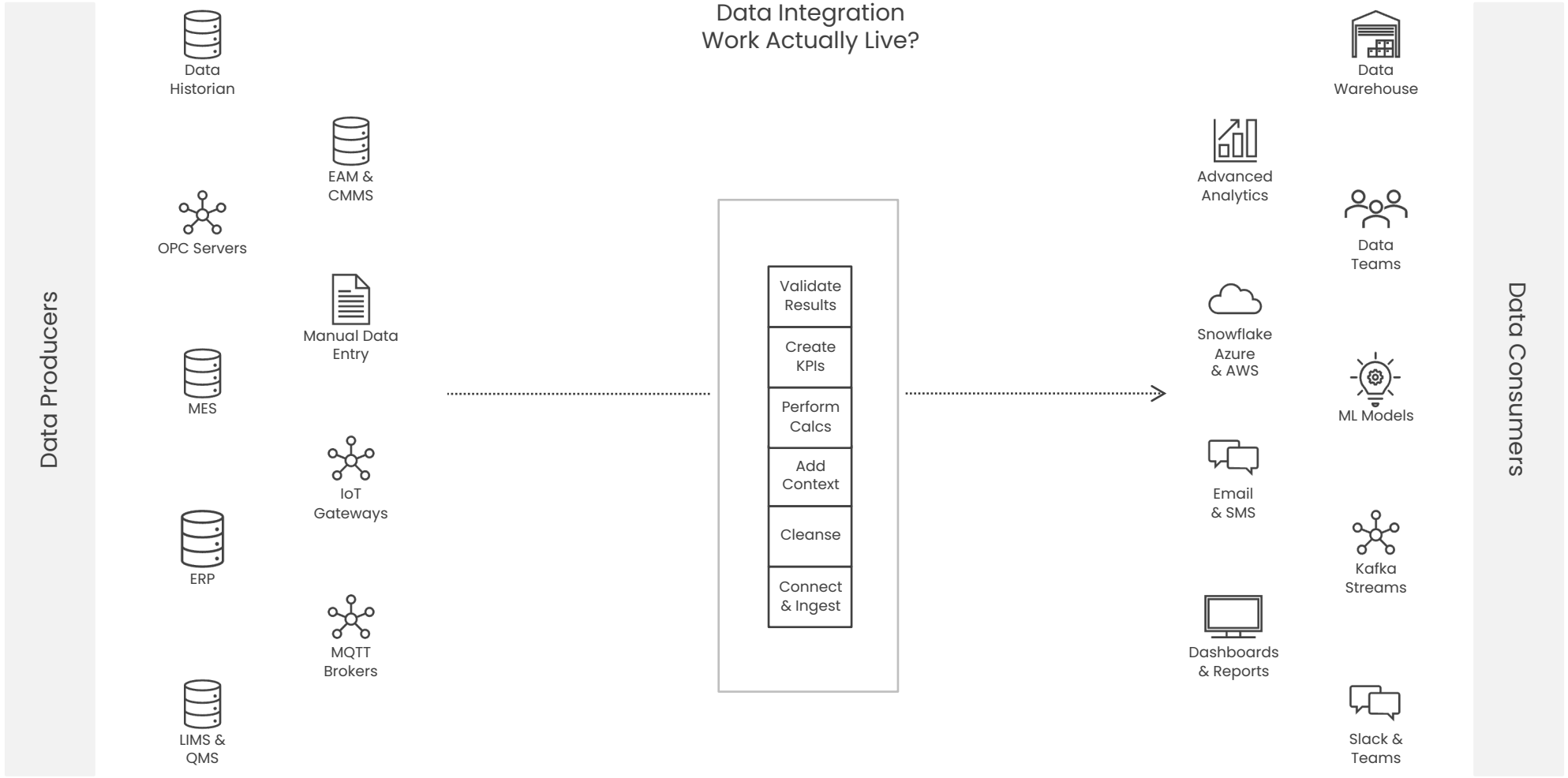
Where Does This Data Integration Work Actually Live?



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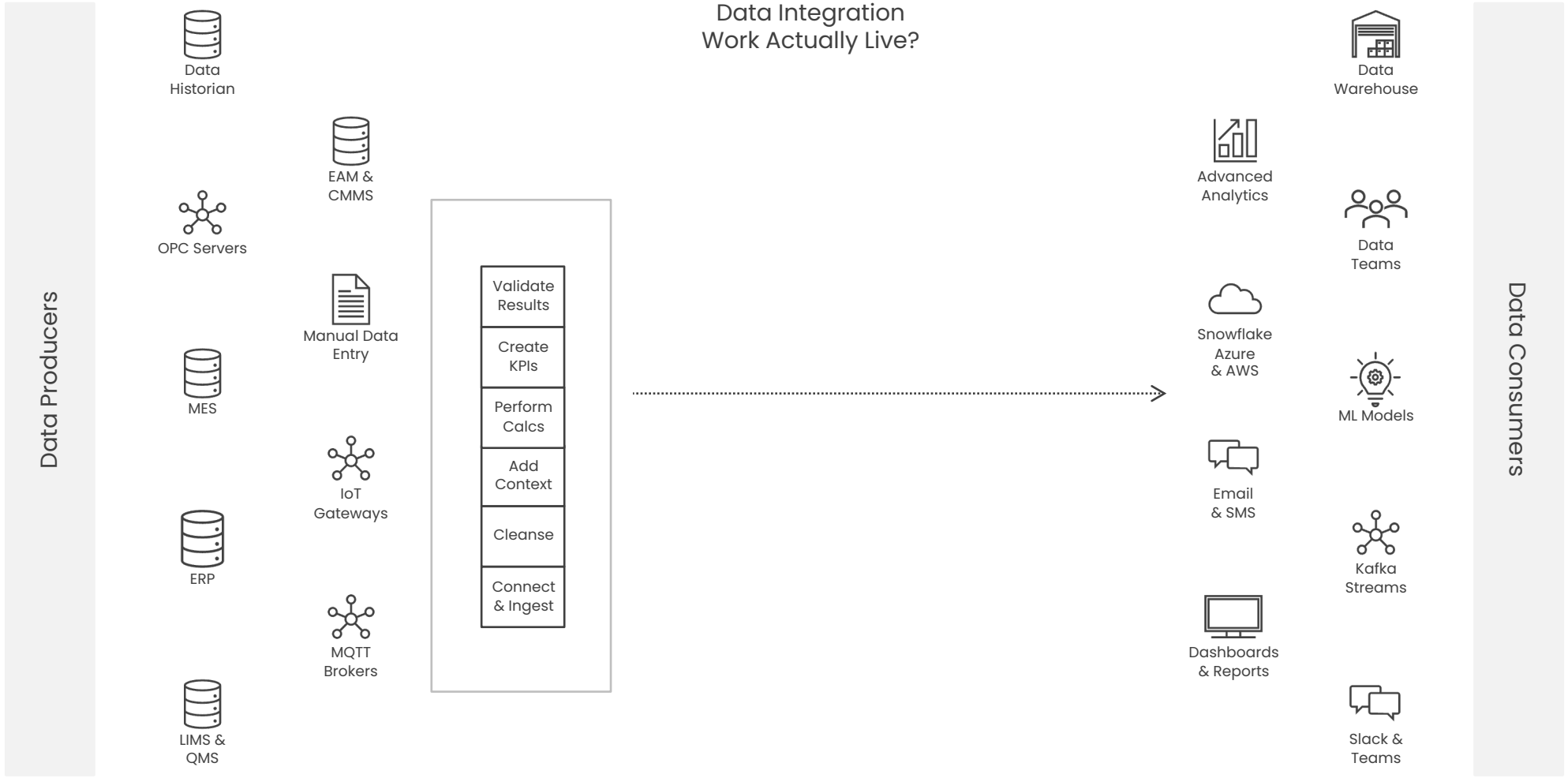

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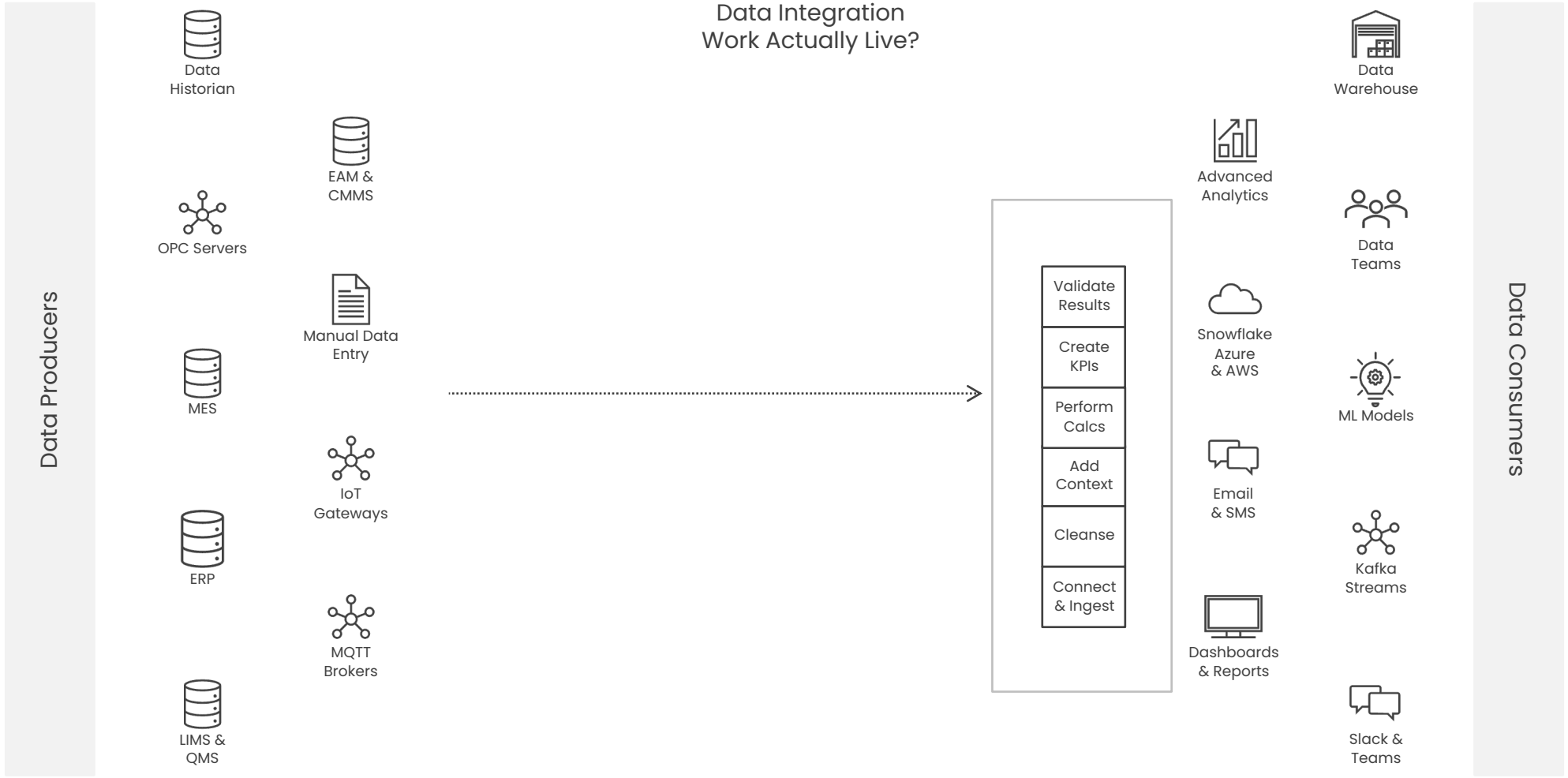
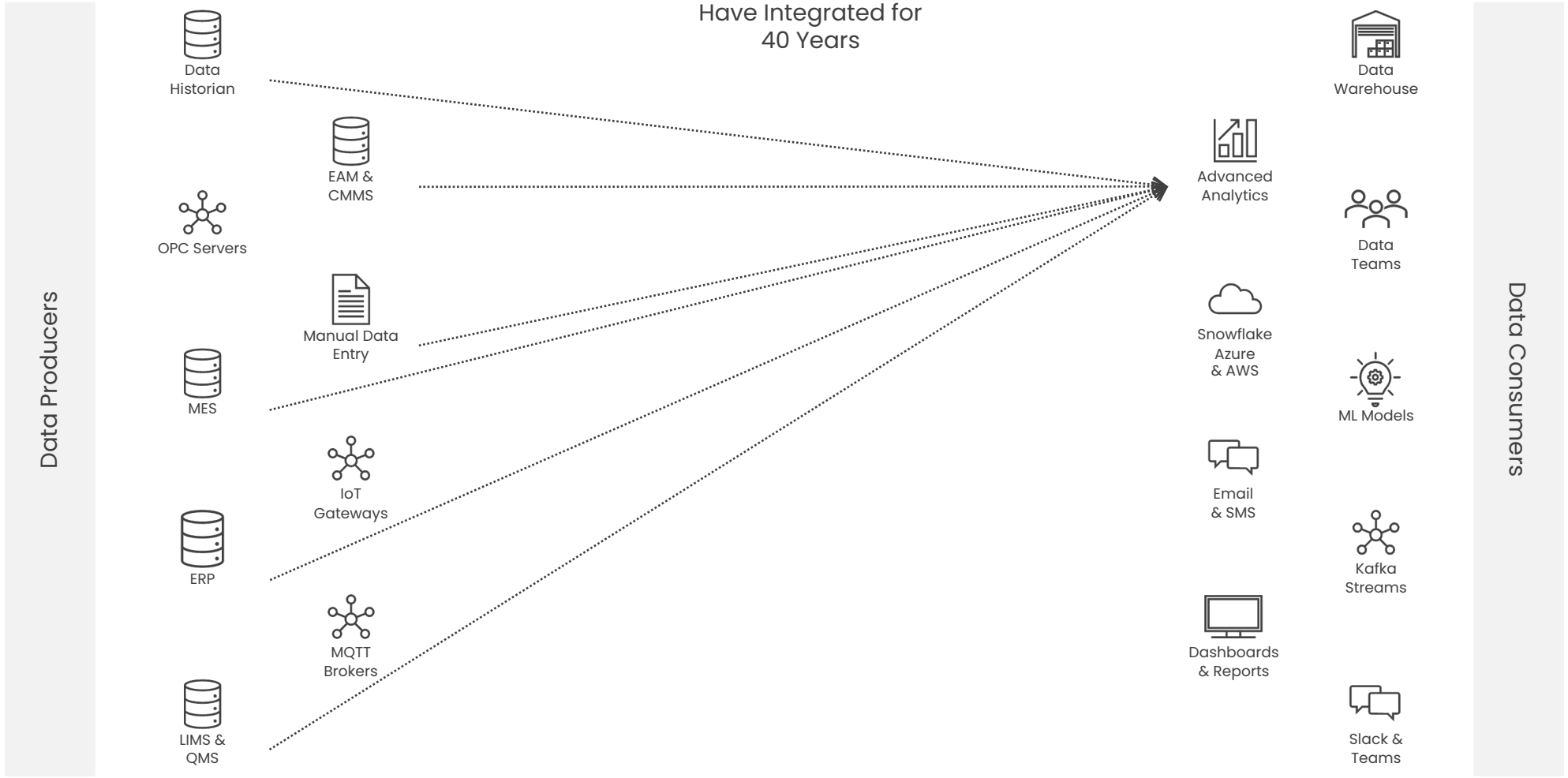
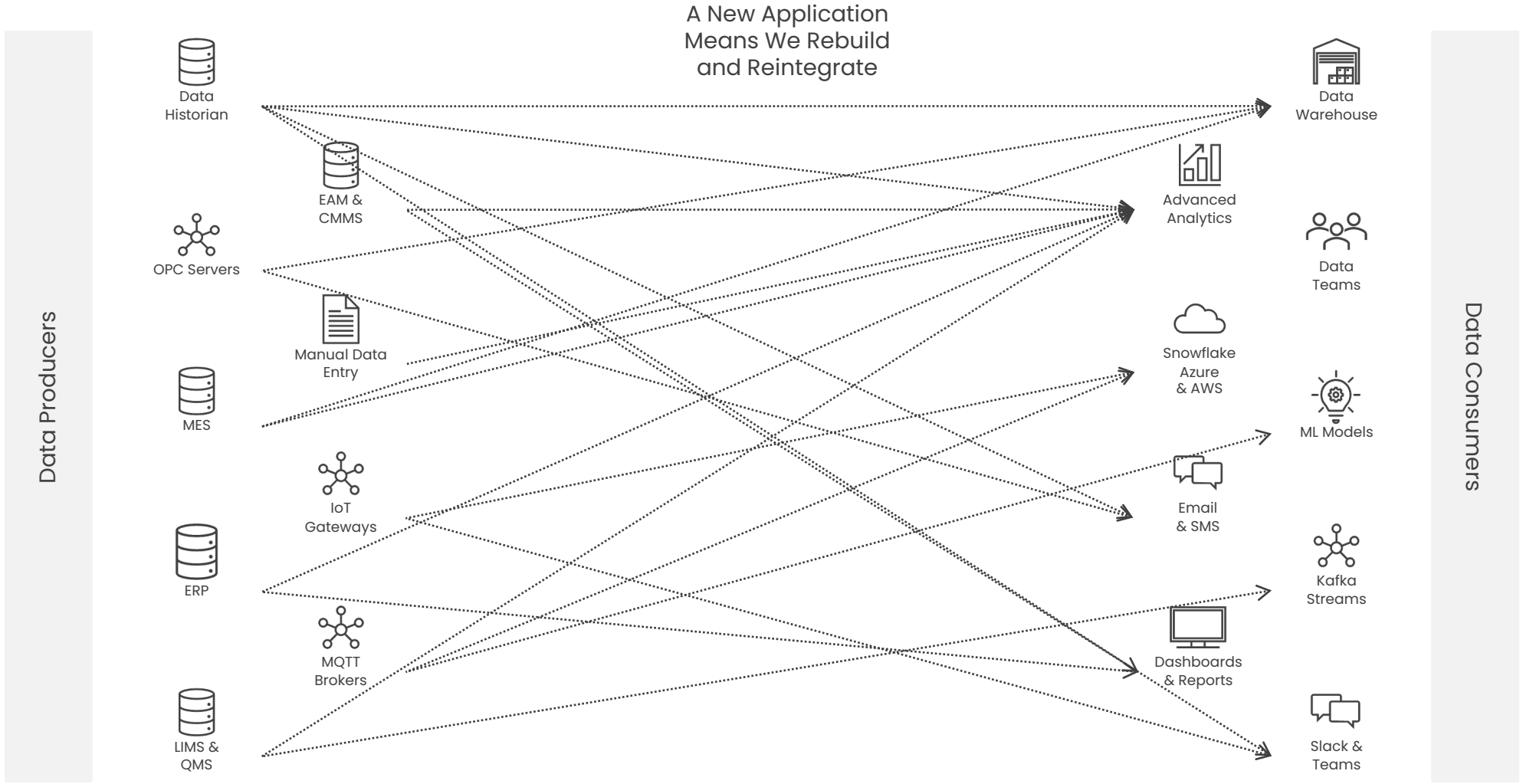


This Is How We Have Integrated for 40 Years




A New Application
Means We Rebuild
and Reintegrate
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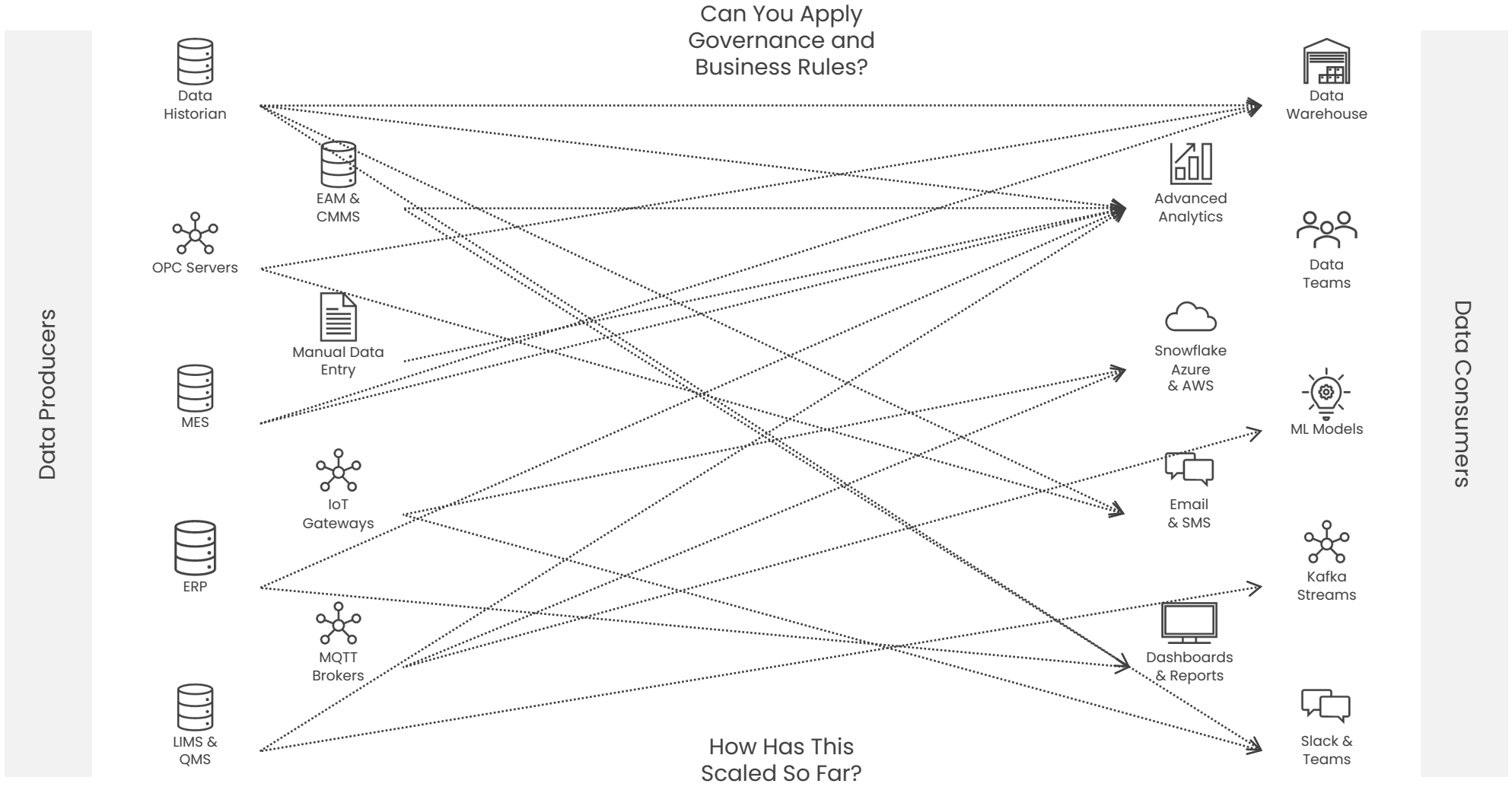
Can You Apply Governance and Business Rules?
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How Has This Scaled So Far?

Data Producers

Data Historian

EAM & CMMS

OPC Servers

Manual Data Entry

MES

IoT Gateways

ERP

MQTT Brokers

LIMS & QMS

Flow Provides The Framework Your Analytics Needs To Scale

Three Main Functions

- Data Models & Templates
- Calculation Engine
- Information Hub

Advanced Analytics

Snowflake Azure & AWS

Email & SMS

Dashboards & Reports

Data Warehouse

Data Teams

ML Models

Kafka Streams

Slack & Teams

Data Consumers

Flow Software’s Mission
is to Supercharge Decision-Making
Introducing The World Cup Predictor

#1 – Data Models and Templates

Flow's Data Modeling Templates, Calculation Engine, and Information Hub... build analytics that scale!

Flow connects to operational and enterprise data sources.

- SQL Historians
- NoSQL Historians
- MES
- ERP solutions
- CMMS
- LIMS / QMS
- Other SQL dbs
- MQTT Brokers
- OPC Servers
- Kafka Streams
- IoT Gateways
- Manual data entry
- Web API
- CSV files

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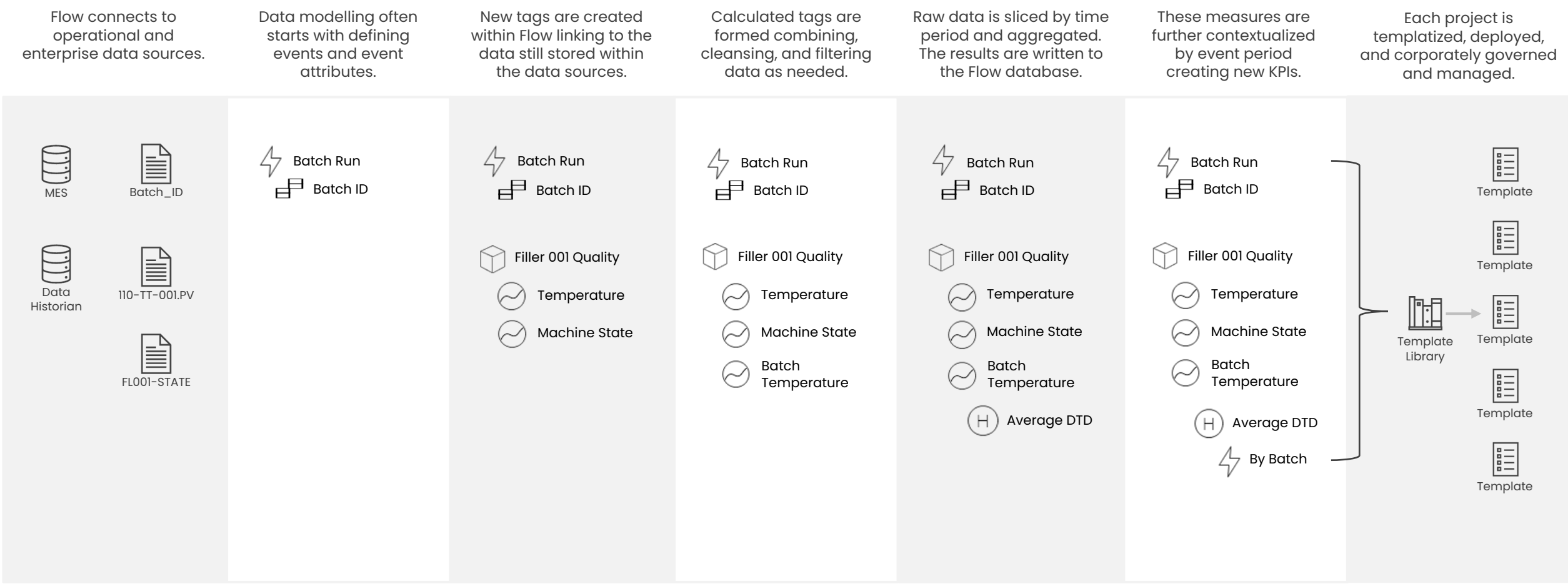

#2 – Flow Calculation Engine

#3 – Information Hub

Flow's Data Modeling Templates, Calculation Engine, and Information Hub... build analytics that scale!

Flow connects to operational and enterprise data sources.

Data modelling often starts with defining events and event attributes.

New tags are created within Flow linking to the data still stored within the data sources.

Calculated tags are formed combining, cleansing, and filtering data as needed.

Raw data is sliced by time period and aggregated. The results are written to the Flow database.

These measures are further contextualized by event period creating new KPIs.

As an information hub, Flow connects your apps and teams to everything it's connected to.