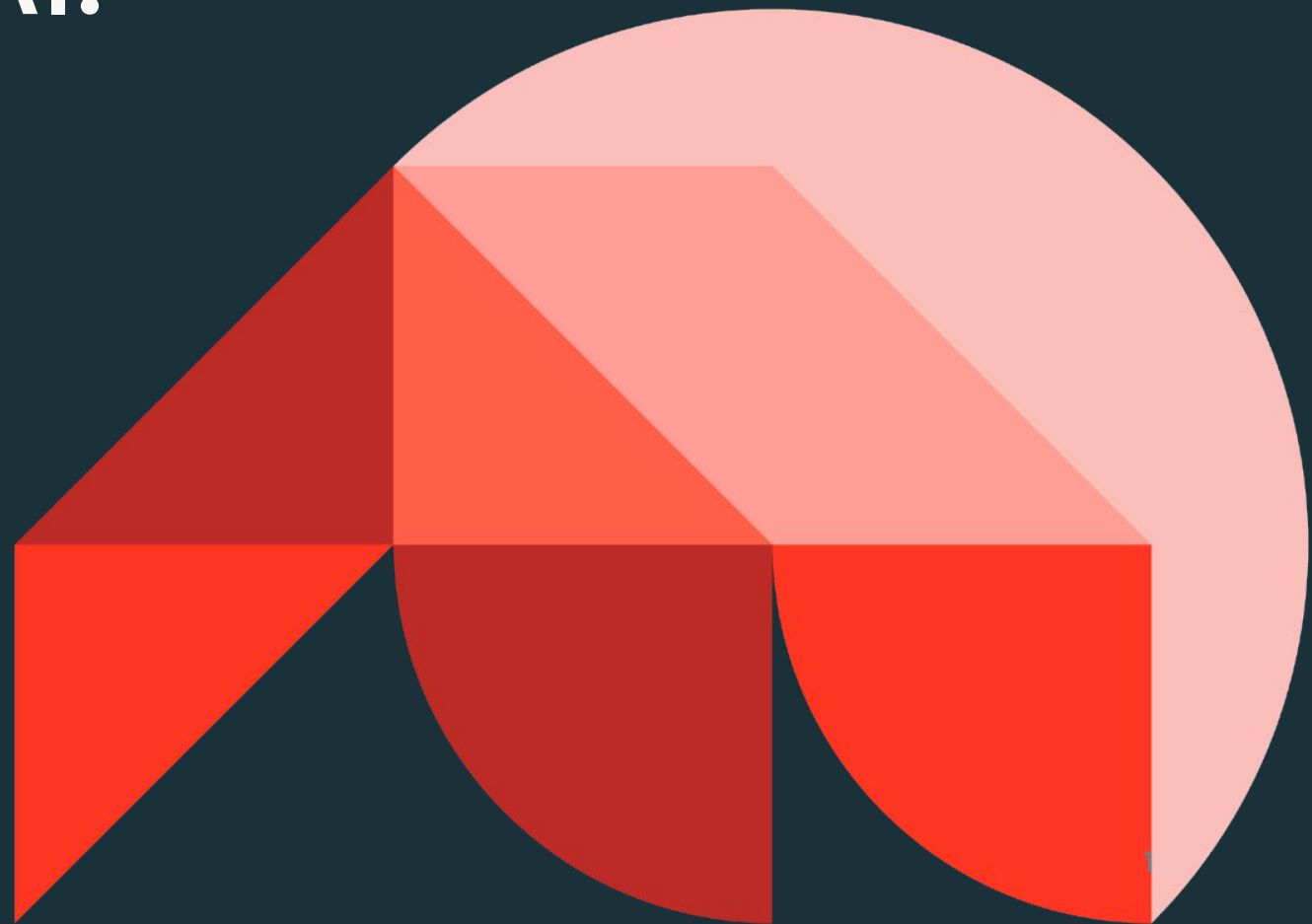




# Your Data. Your AI. Your Future. in Energy

[databricks.co/energy](https://databricks.co/energy)

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# databricks

The data and AI company



**6,000+**  
global employees



**\$1.5B+**  
in revenue



**4B+**  
in investment



Inventor of the  
**lakehouse**  
and pioneer of  
**generative AI**



**Gartner-recognized leader**  
Database Management Systems  
Data Science and Machine Learning Platforms



Creator of:



# Why Databricks for Energy

**2020**

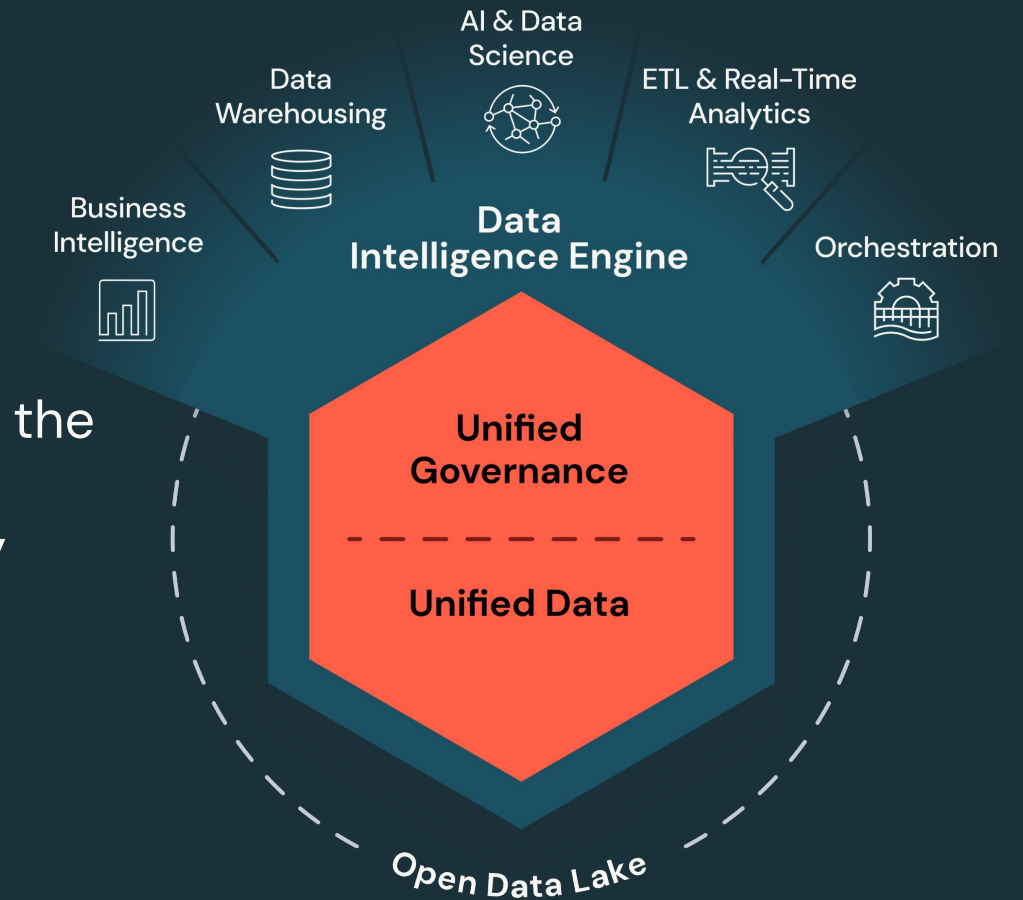
Databricks pioneered the lakehouse architecture

**Today**

**74%** of global enterprises have adopted lakehouse

MIT Technology Review  
Insights, 2023

Databricks launches the  
**Data Intelligence Platform for Energy**



# Building data-driven businesses

Databricks powers the biggest names in the industry, 800+ customers

## Integrated



## Segment



## Renewables



## Utilities



## Electrification



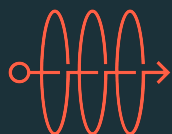
## Technology Ecosystem





# Industry trends

Data and AI is reshaping the energy industry



## Precise outcomes and frictionless experiences

Deliver on the continuously connected customer relationship



## Productivity with real-time insights

Empower the manufacturing workforce of the future



## AI everywhere

Generative AI, LLMs, chatbots, predictive maintenance are key areas for investment



## Smart Grid Optimization

Balance supply and demand with more efficient power distribution



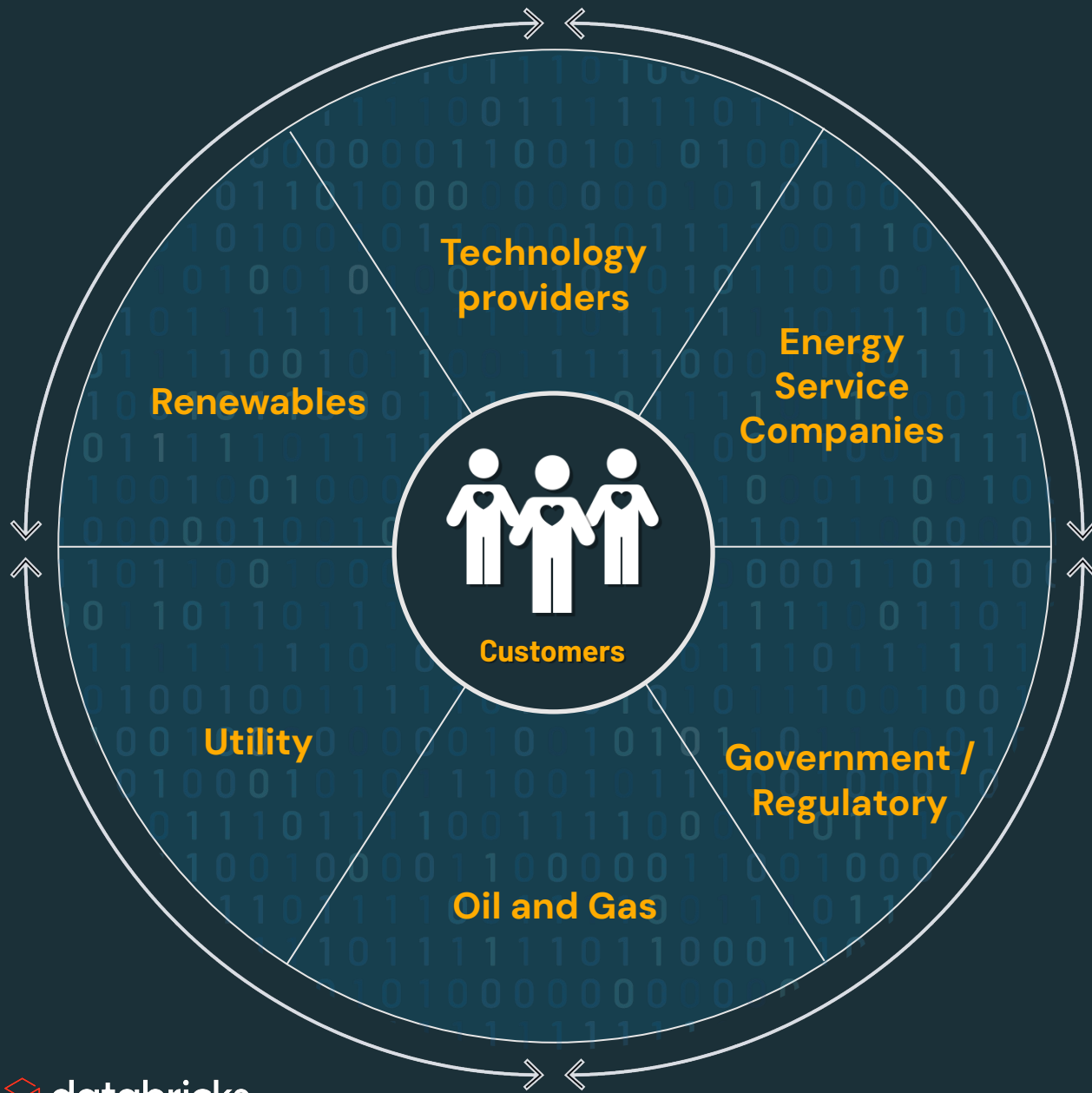
## Renewable Energy Forecasting

Forecast the availability of renewable energy sources and optimize their integration into the power grid

***“Energy is **Personal**”***

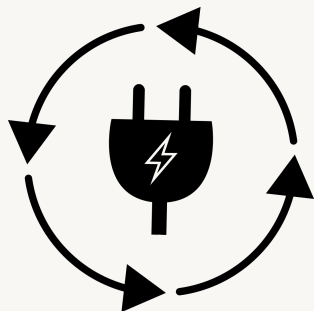
Dr Christina Lampe-Önnerud, CEO & Battery Innovator





**Collaborate in the  
Connected Energy  
ecosystem!**

# Two mega forces reshaping the energy system



## ENERGY TRANSITION

Changing energy mix  
Decentralization and decarbonization  
Non-traditional competition

## A NEW FUTURE ENERGY SYSTEM



## DIGITALIZATION

Increasing consumer expectations  
New technology  
Evolving business models

# Key Data Challenges

## Barriers to transformation



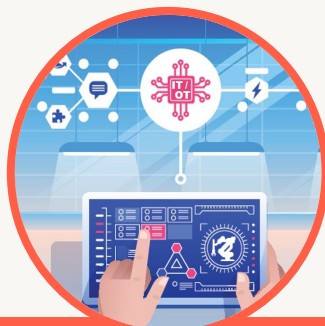
**Massive data volumes**

Data sizes over 4X more vs. other industries  
(Sensors, IIoT, SCADA, Smart Meters)



**Onboarding untapped data sources**

Valuable new and 3rd party data sources  
(natural language logs, images, video, telemetry, geospatial)



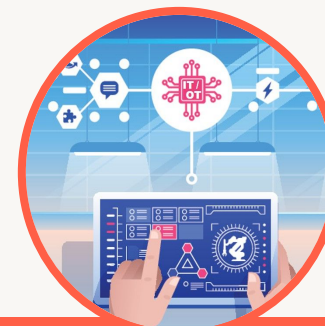
**Driving OT-IT convergence**

“Always-on”: provide freshest & most complete data  
(periodic, micro-batch, real-time)



**Bring AI/ML to where it's needed**

Delivering insights with very low-latency  
(support for assets with intermittent connectivity)



**Data sovereignty & privacy**

Managing compliance consistently  
(across different regions)



# Trends driving transformation across a multiple ecosystems

The pandemic and global events have reshaped fuel & fuel retail



**Inflation and economic changes impacting forecastability**



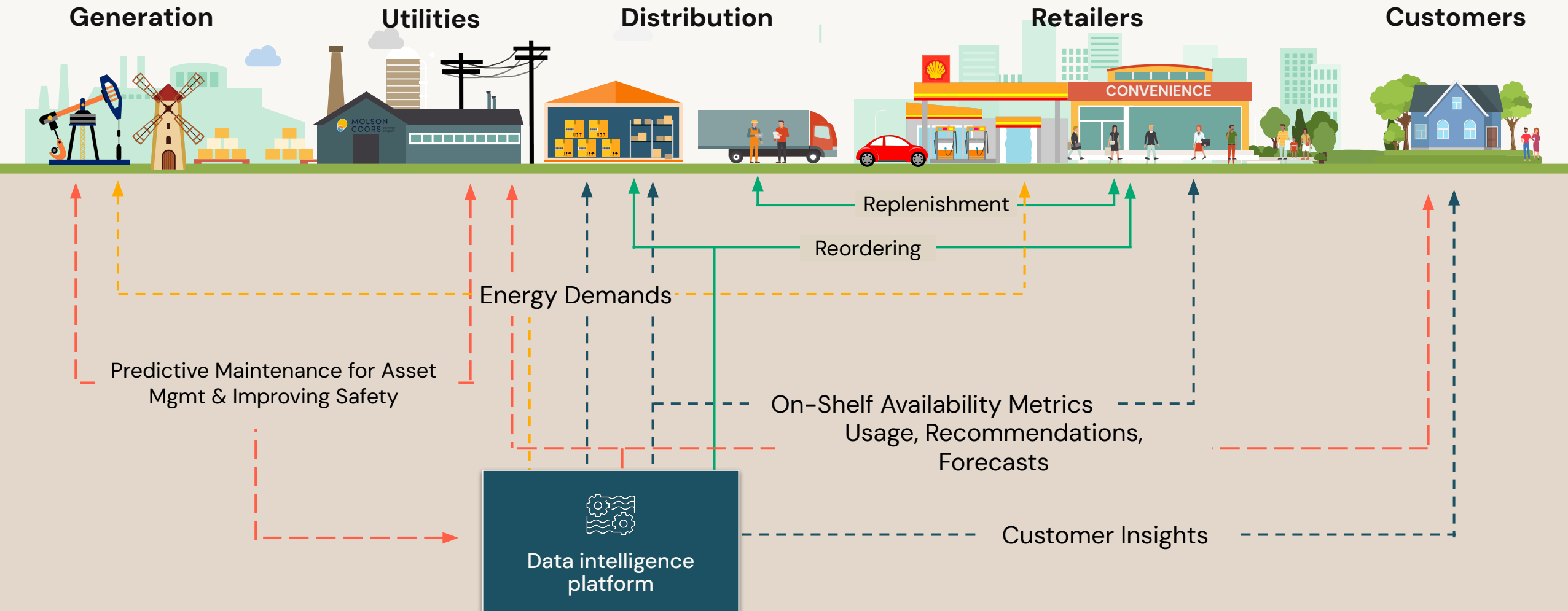
**Transitioning market toward EV & changing customer demands**



**Operationalizing sustainability across the entire value chain**

# Data intelligence platform across the Ecosystem

Coordinating the activities of many stakeholders in real-time, where even minutes of delay can lead to material impact





# Databricks Delivers Impact



Utilizing diverse data from wind farms, solar panels, and refineries to develop insights for creating a sustainable energy system and lowering carbon emissions.

▼  
Saved millions of dollars saved in potential repair costs and increased time to validate labels by 9x



Realizing the value of automated gas forecast reporting and self service analytics to increase productivity and improve electricity operating indexes

▼  
Reduced jobs run time by 86% and saved millions on forecast accuracy



Iterating in near real time to deliver a personalized Experience for the Connected Home through a Smart Thermostat

▼  
18x faster time-to-market for new ML models

67 Million kilowatt hours of energy saved and counting



Data is the lifeblood of digital twins.



# Data & Digital Twins are a **core feature** of this mid-transition period

Drive better integration  
between legacy & new  
systems

Design a system that  
supports future growth &  
de-risks the business

Discover new  
opportunities in unmet  
customer needs

# New Integrations



*40+ connectors in to 70+ OT systems and historians*



*Live sharing of OSI PI & Wonderware datasets via Delta Sharing*



*200+ connectors to physical systems via Litmus Edge*

**250+** *OT/industrial data connectors  
(Read/Write Delta & UC Natively)*

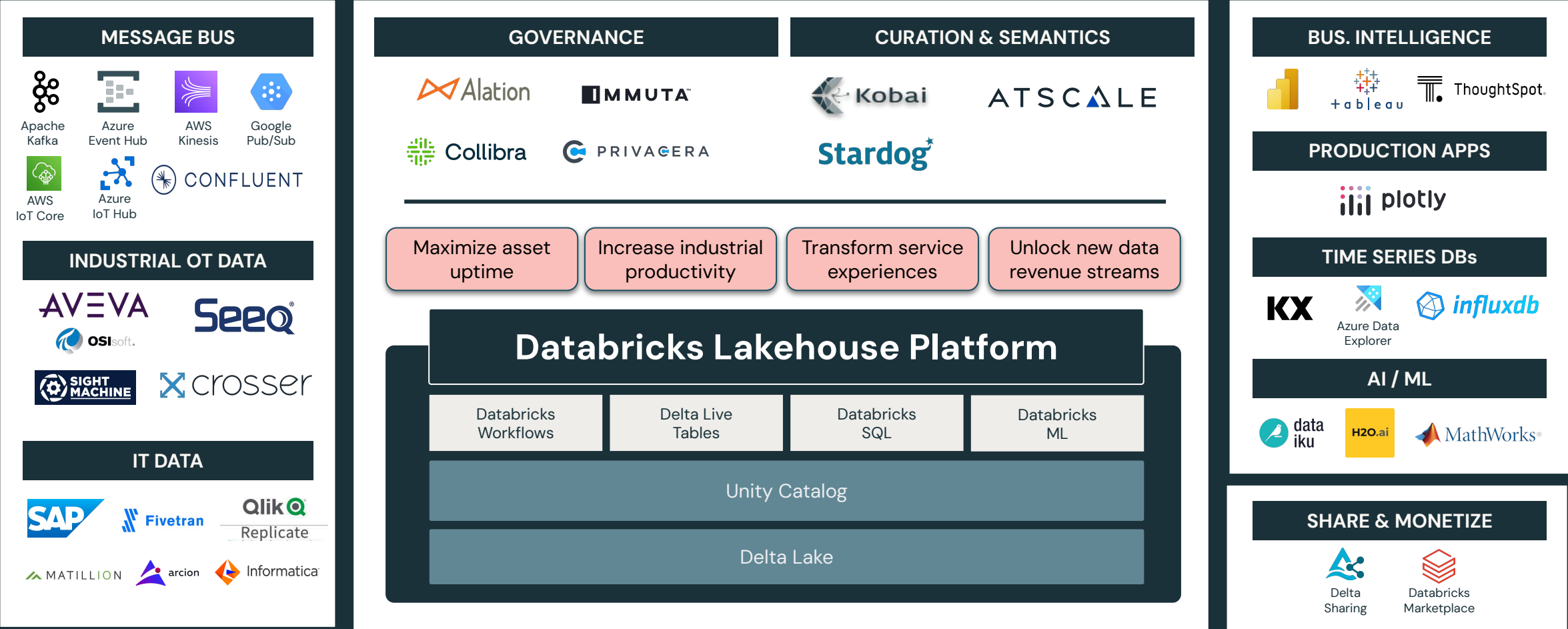


# The IoT data ecosystem is standardizing on Databricks

Ingest

Data Management

Activation



# Data Intelligence Platform For Energy.





Asset Performance  
Management

Renewable Energy  
Forecasting

Energy Trading

Energy Grid  
Optimization

# DIGITAL TWINS

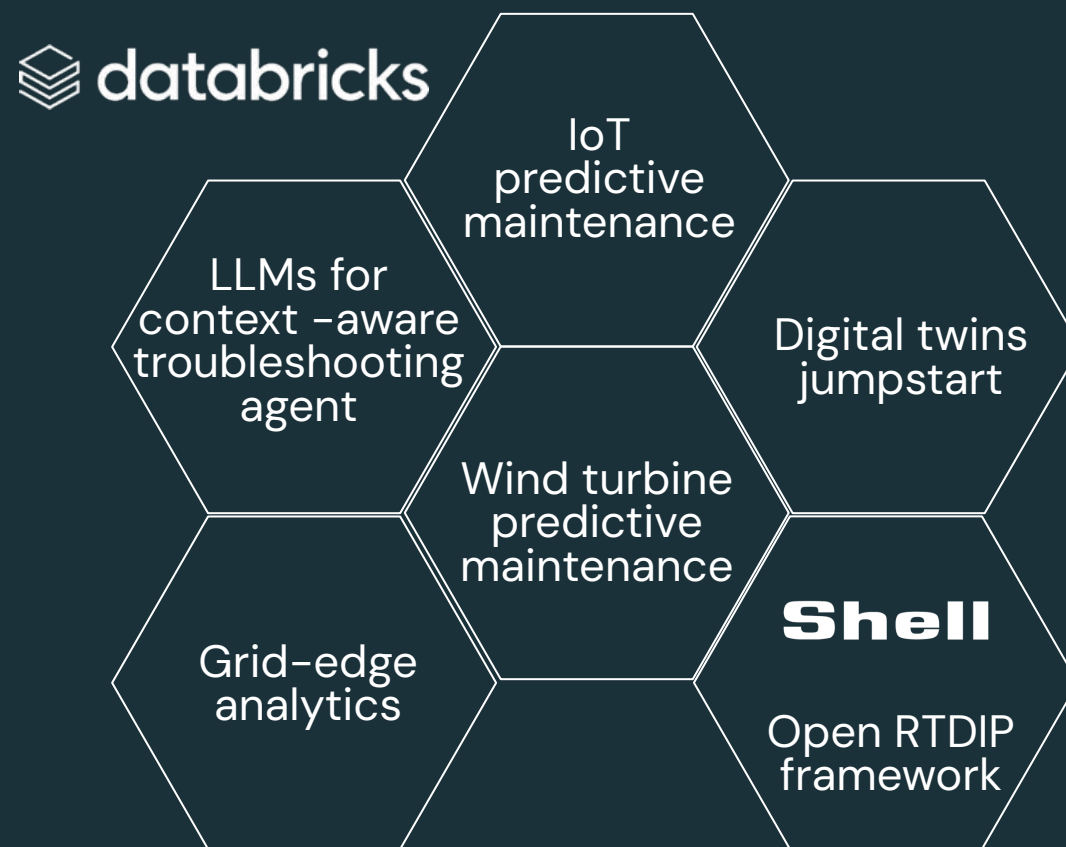
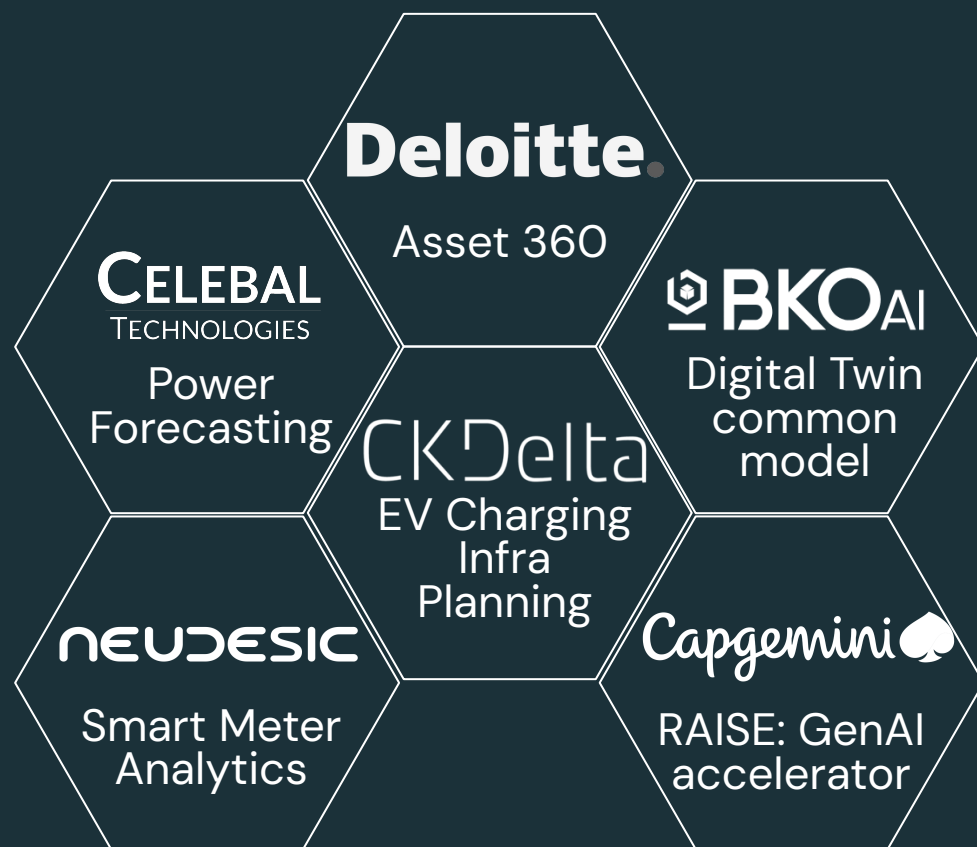
Decarbonization

Personalization

+ MANY MORE USE CASES



# New Solutions



# Energy Solution Accelerators

Pre-built solutions for priority use cases

## Smart Manufacturing

Digital Twins in Manufacturing

OEE+KPI Monitoring

Computer Vision Foundations

Predictive Maintenance (IoT)

Predictive Quality Control

## Supply Chain/Operations

Part-level demand forecasting

ESG Performance Analytics

Scalable Route Generation

Safety Stock Analysis

On-Shelf Availability

## Connected Platforms

Connected IoT Products

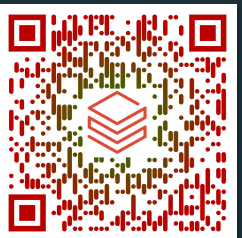
Recommendation Engines

Customer Segmentation

Customer Lifetime Value

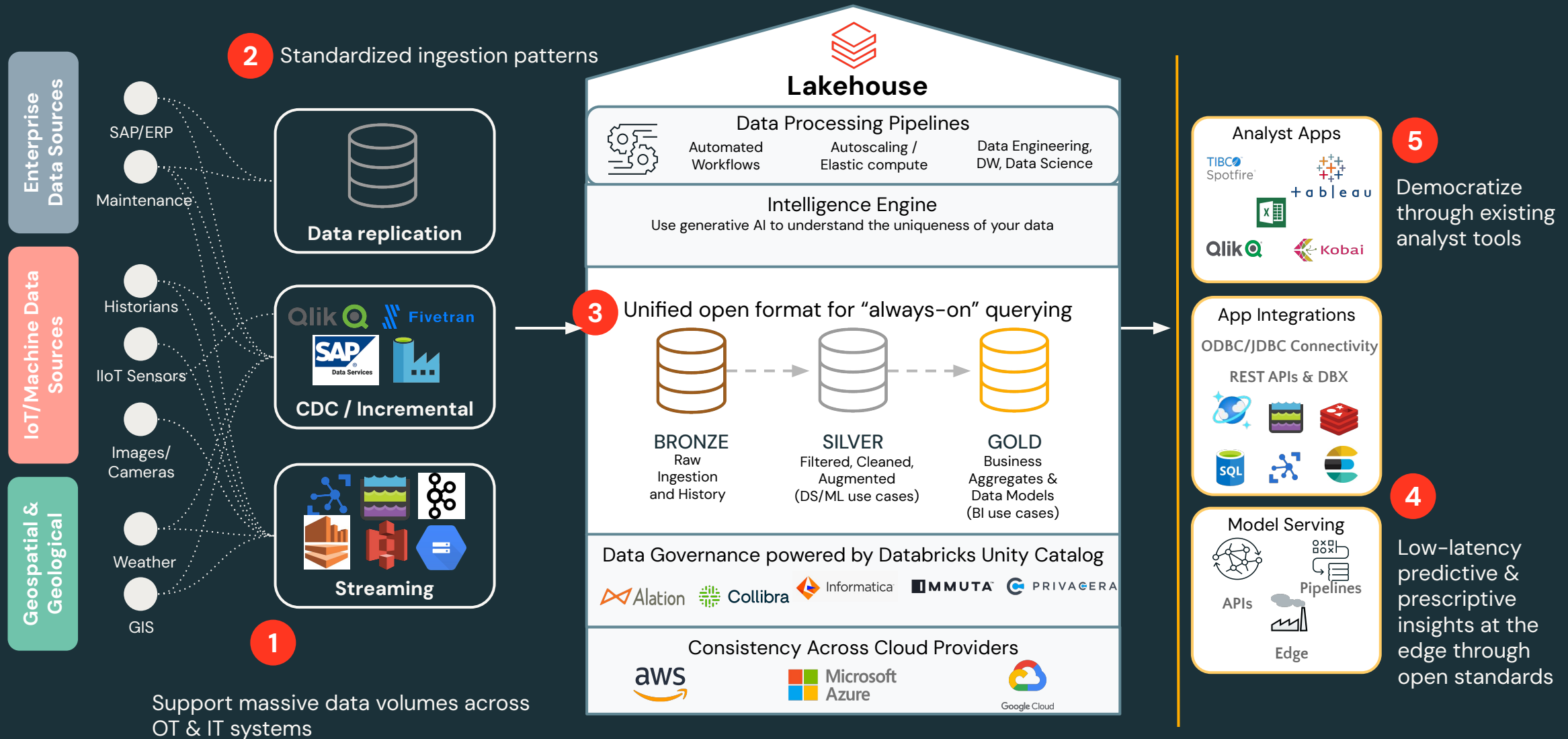
Survival Analysis

Churn Prediction





# Data Intelligence Platform unlocks IT-OT convergence



Thank you.

