



Three Steps to Making Well-Informed AI-Driven Decisions in Real Time

Lalit Ahuja

CTO, GridGain Systems, Inc.

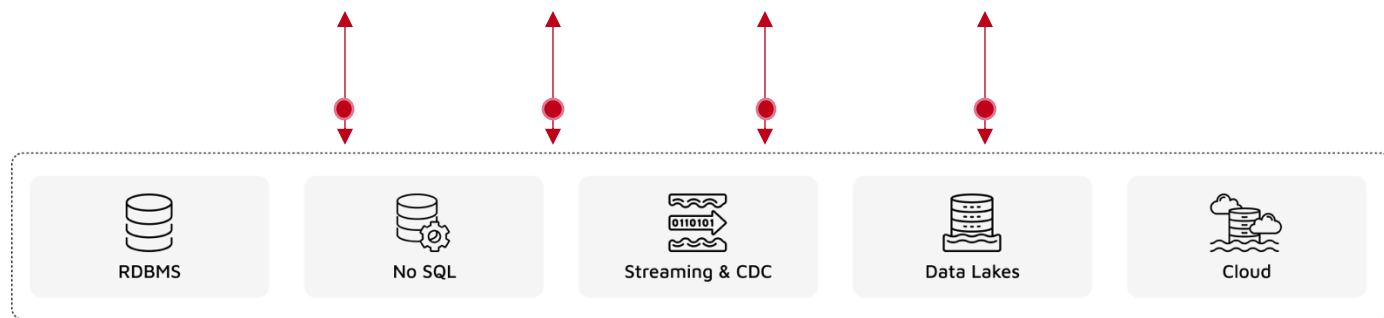
September 11, 2024



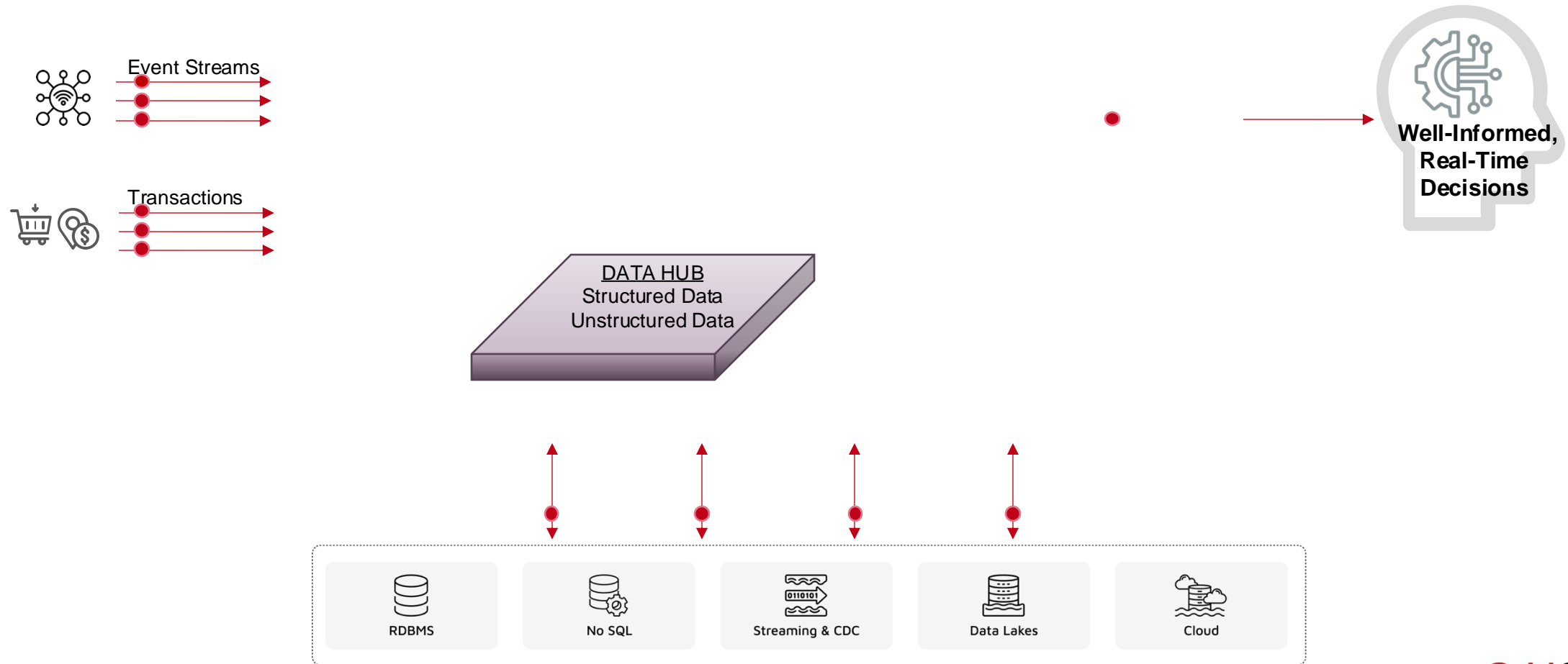
Making a Well-Informed Decision in Real Time



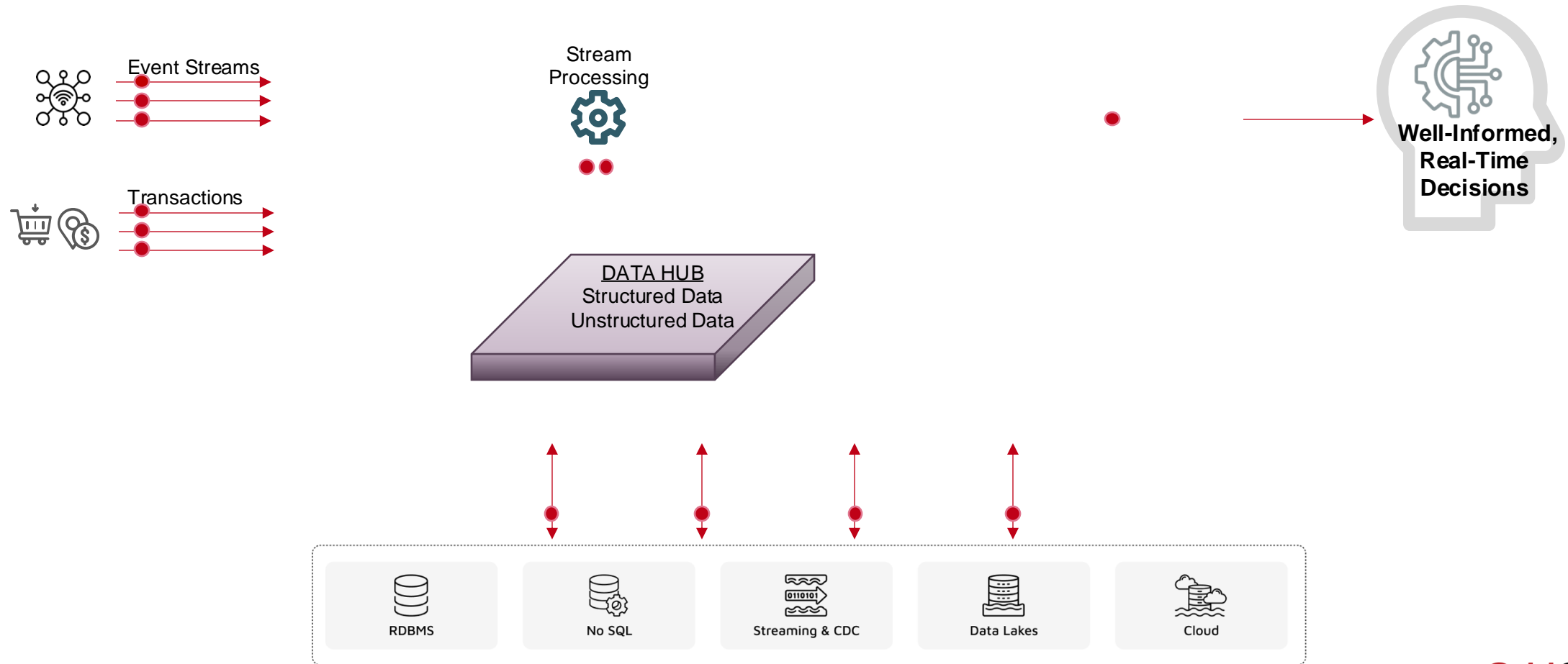
Making a Well-Informed Decision in Real Time



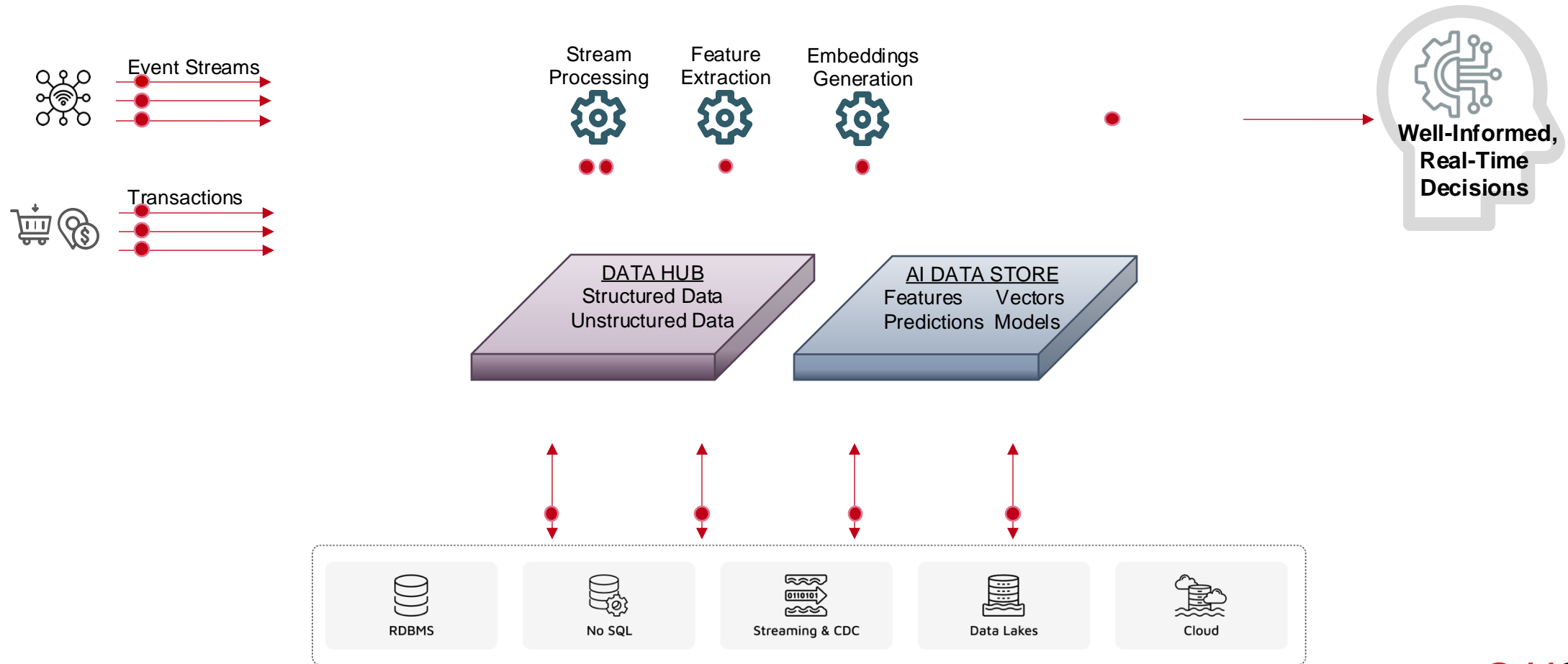
Making a Well-Informed Decision in Real Time



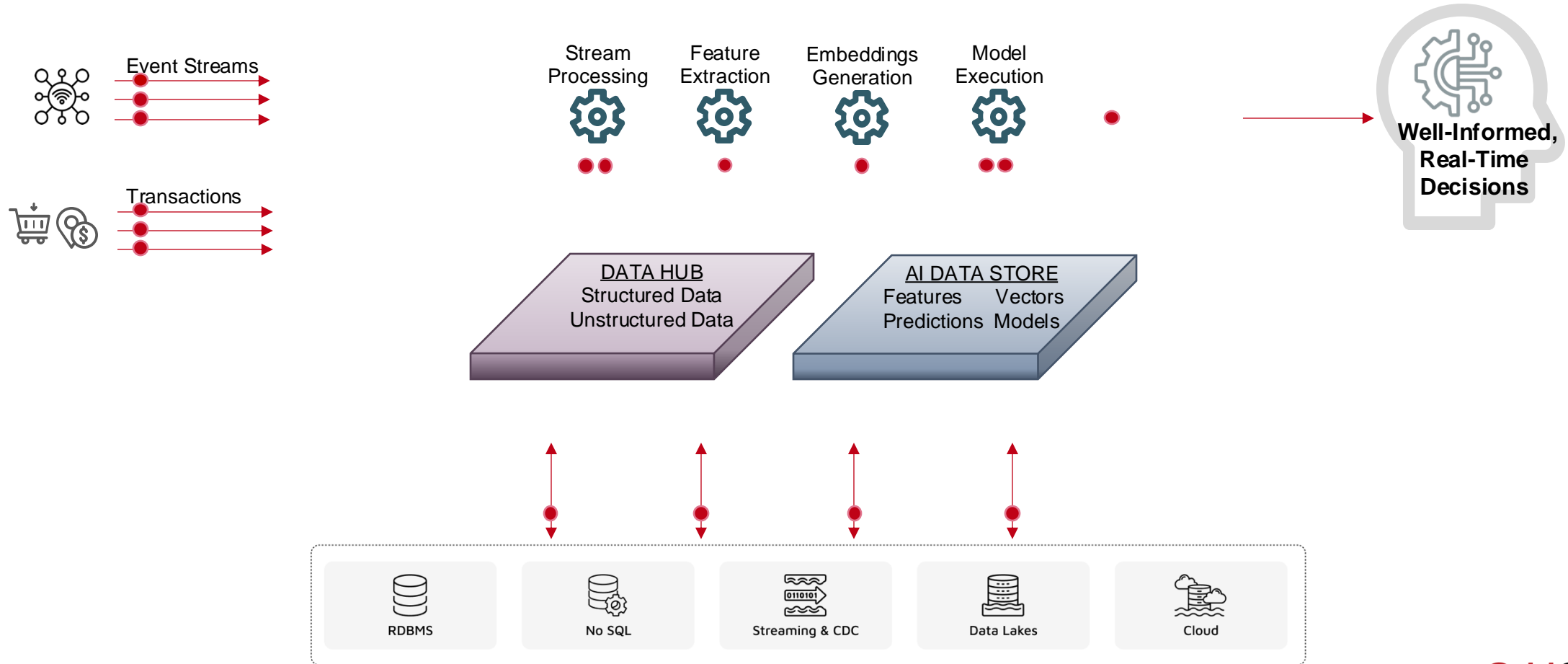
Making a Well-Informed Decision in Real Time



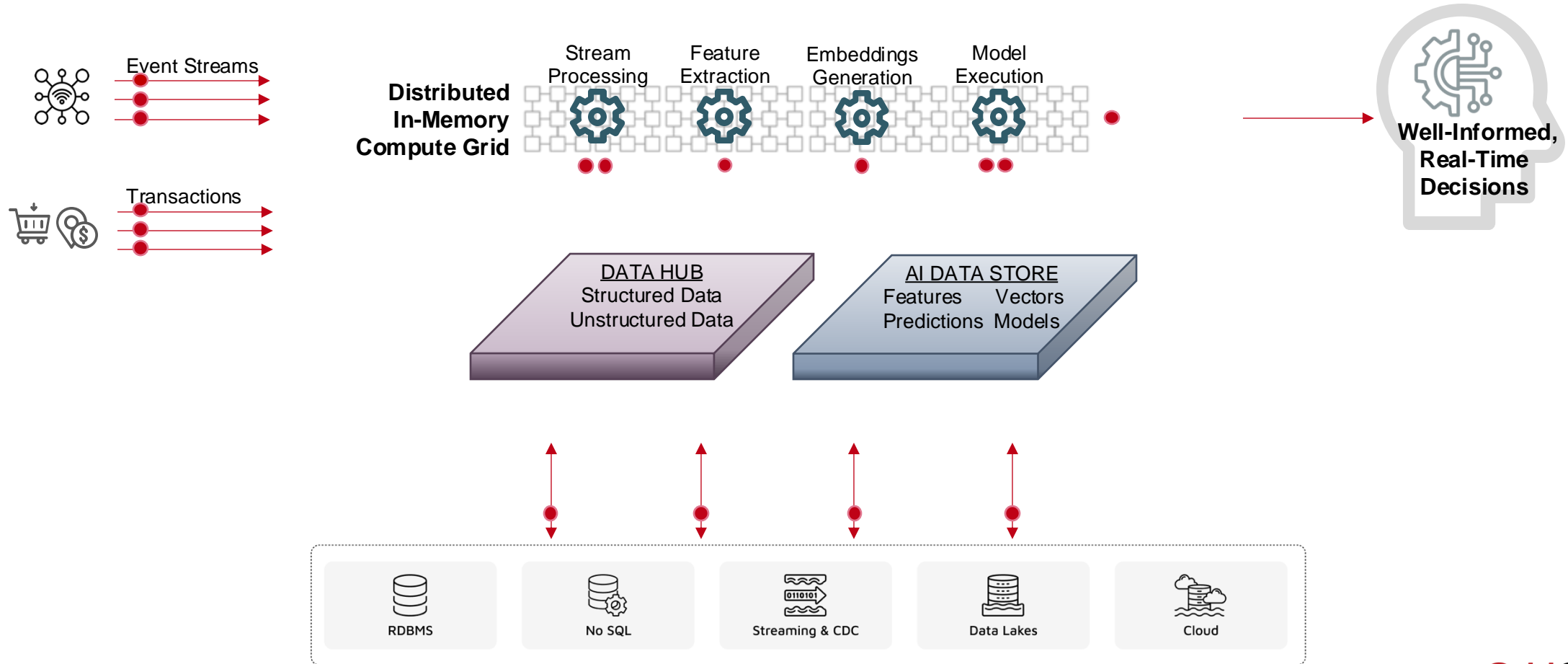
Making a Well-Informed Decision in Real Time



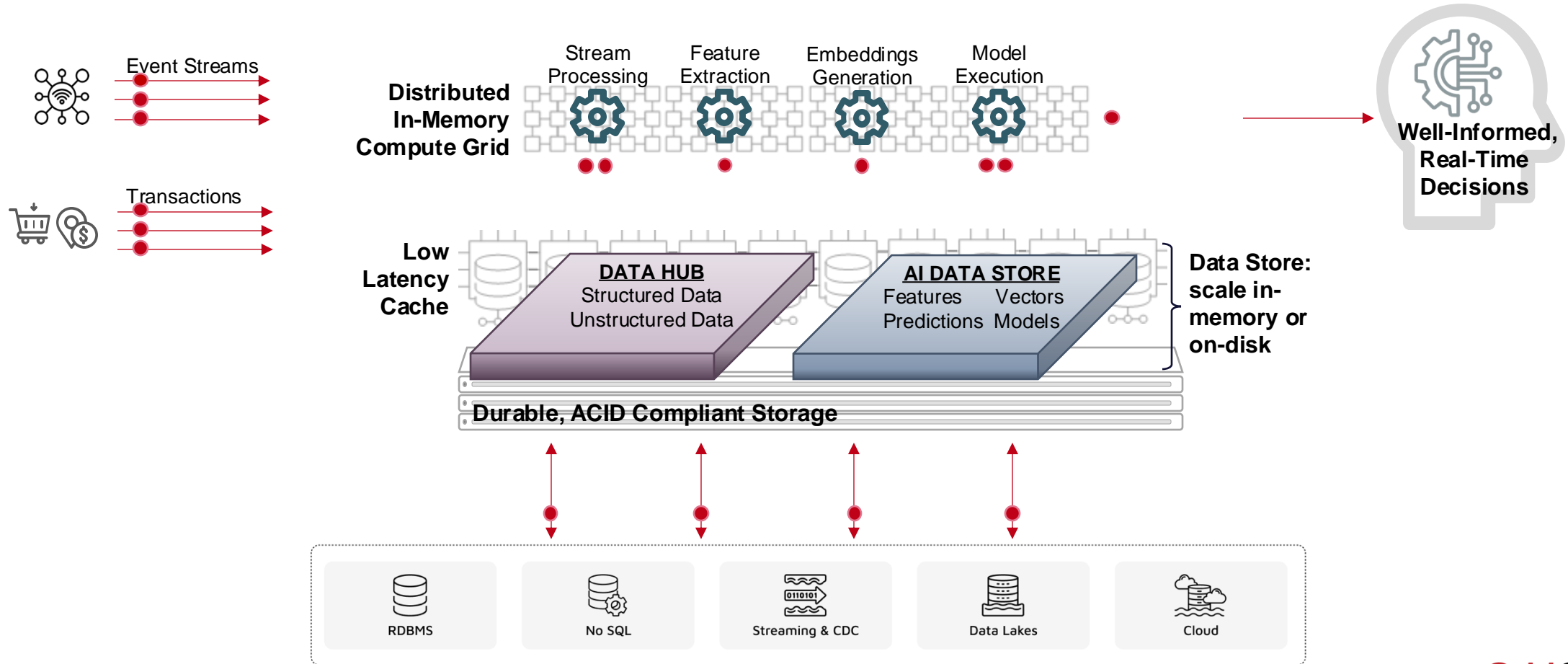
Making a Well-Informed Decision in Real Time



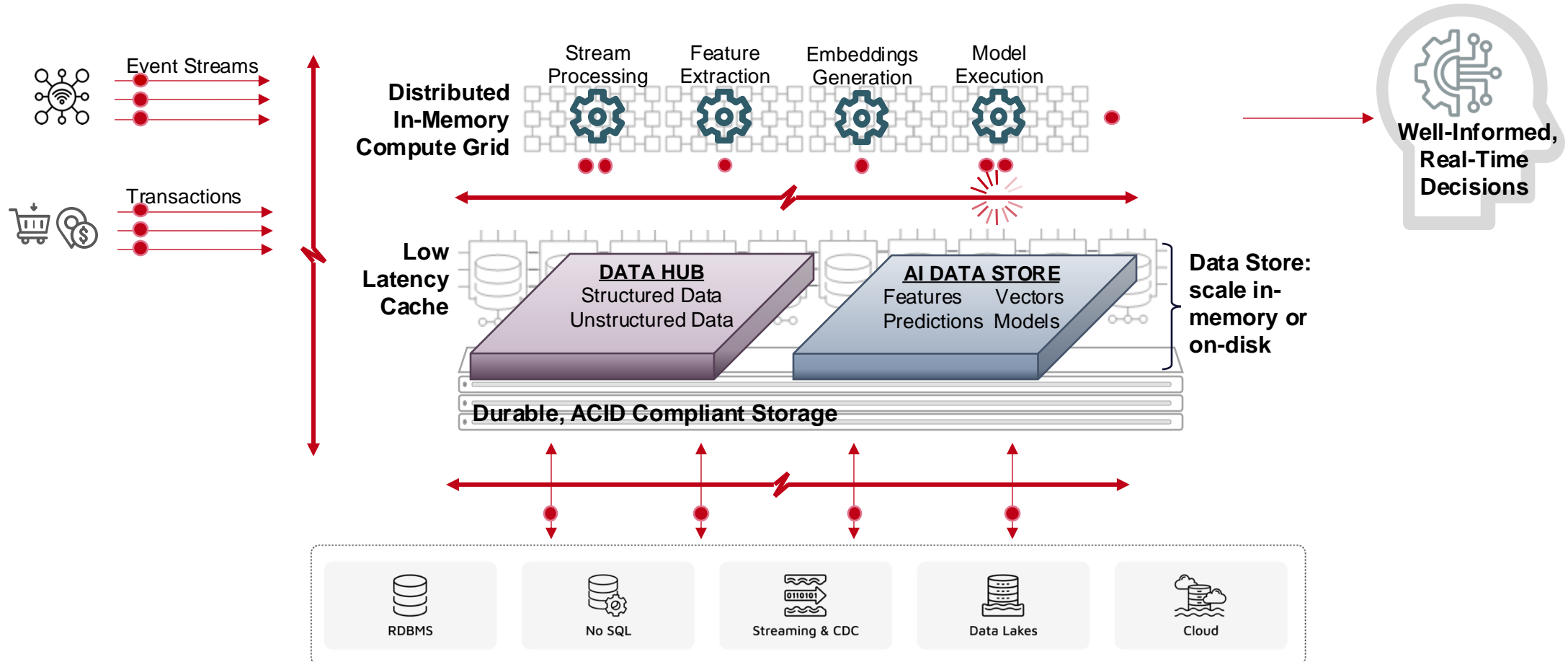
Making a Well-Informed Decision in Real Time



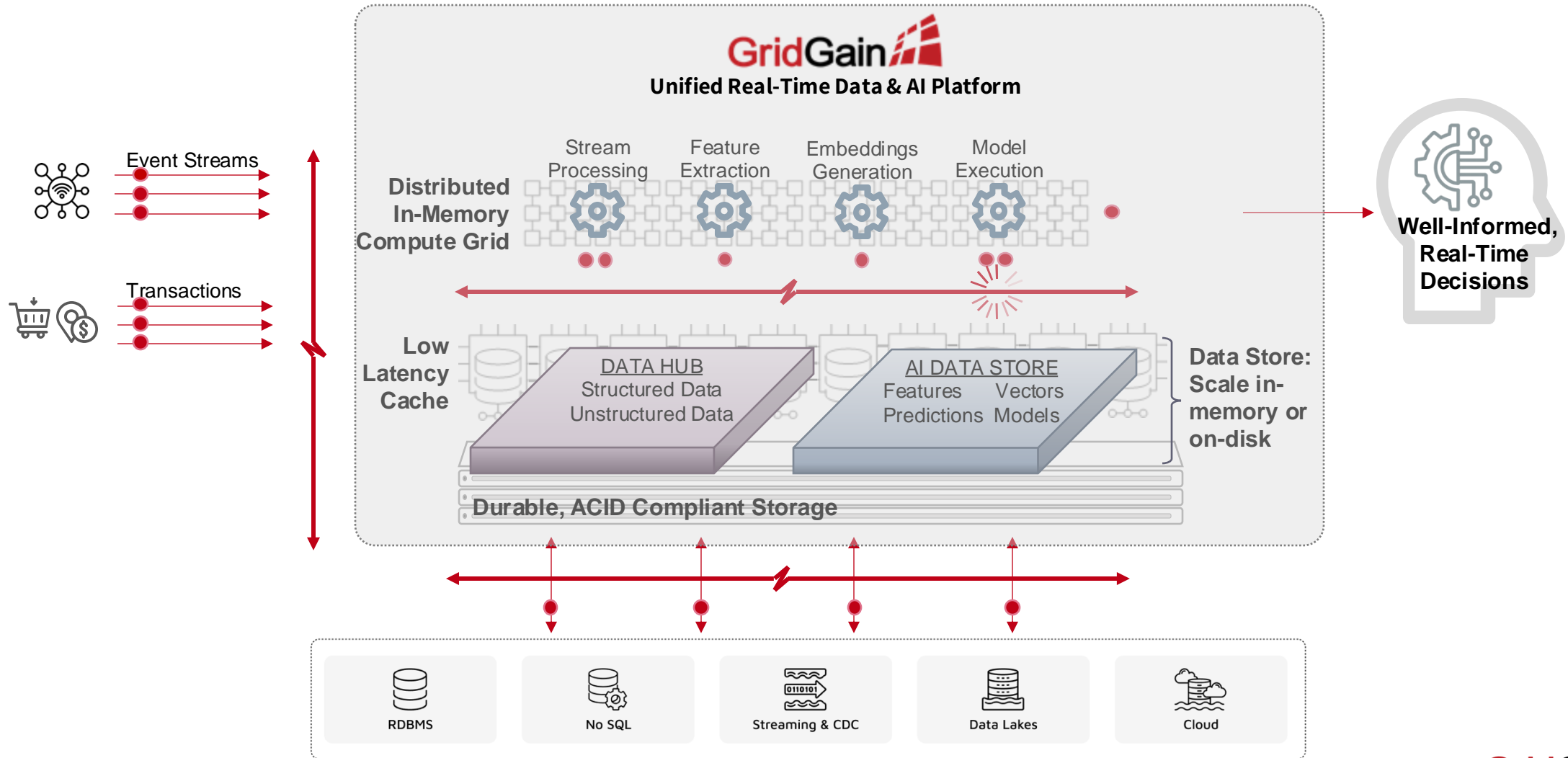
Making a Well-Informed Decision in Real Time



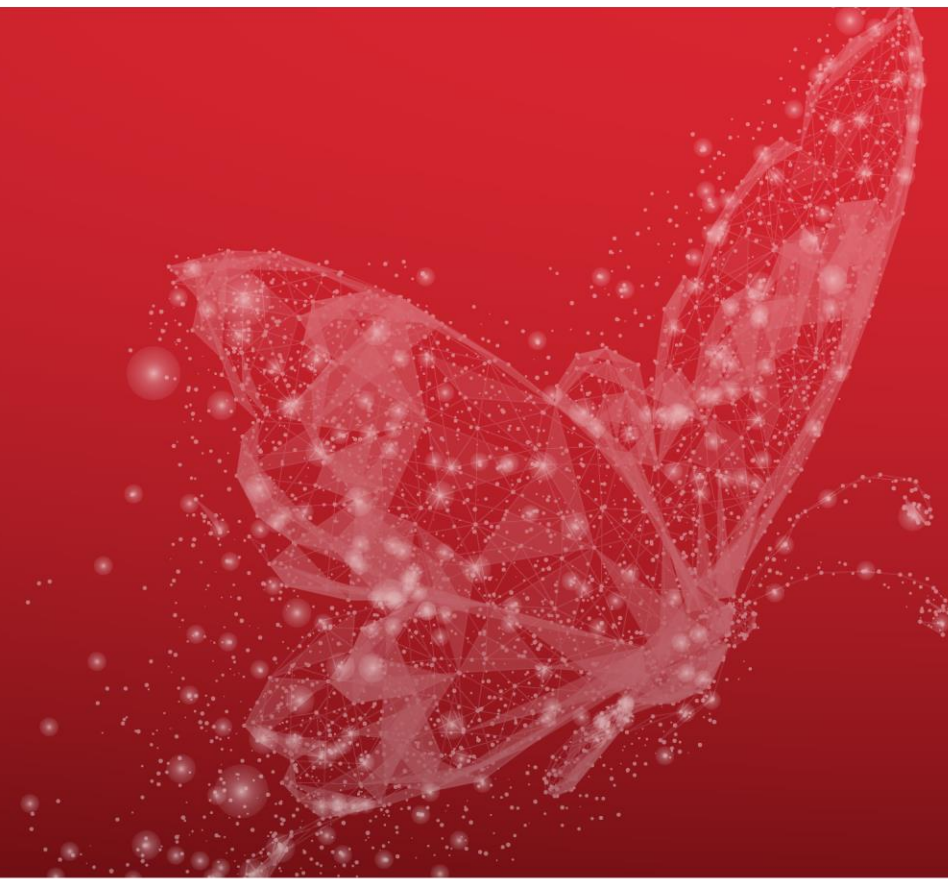
Making a Well-Informed Decision in Real Time



Making a Well-Informed Decision in Real Time



Real-Time AI Use-Cases



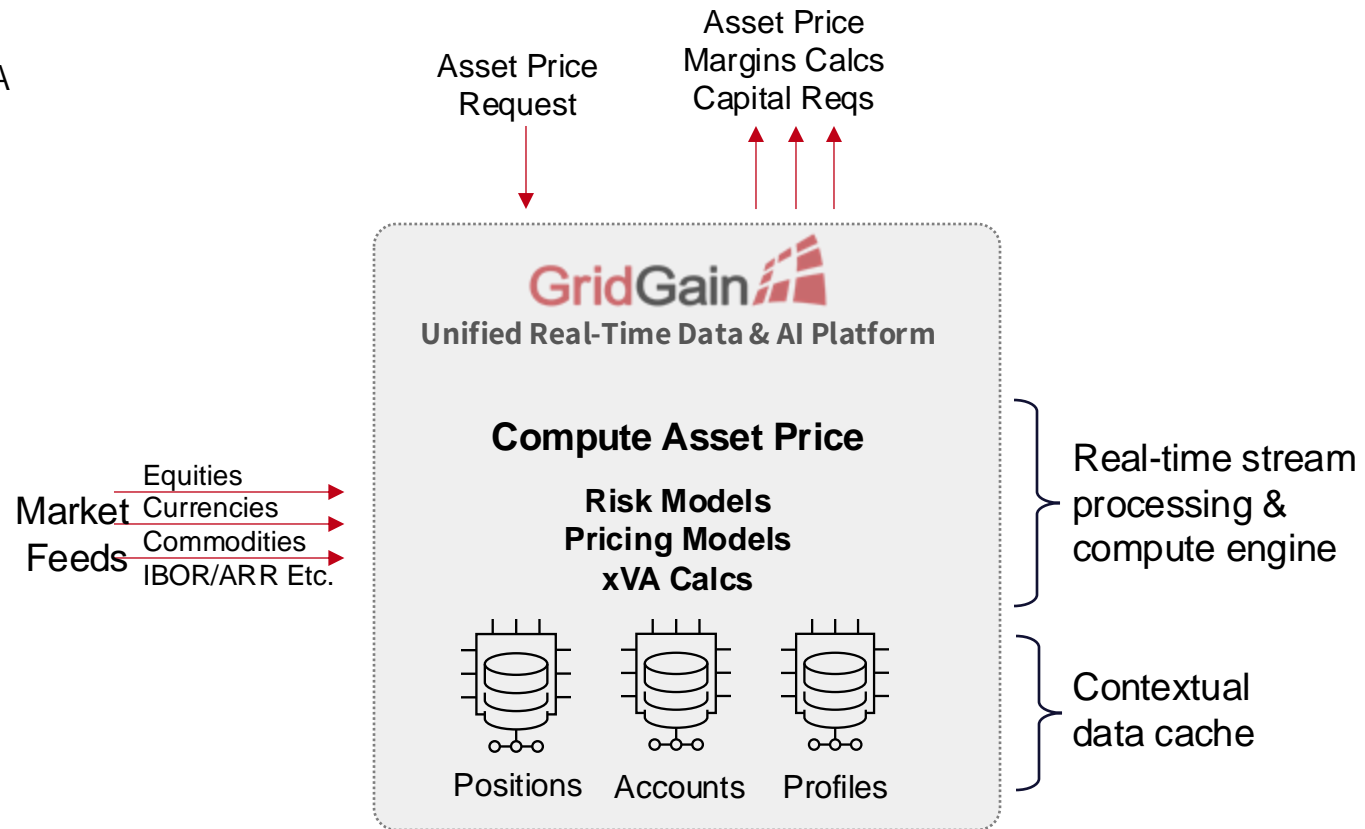
Real-Time Financial Risk Analysis



- Regulatory Requirements
 - Basel III imposes more requirements on FRTB and xVA
 - Banks are required to move to T+0 (or T0) for most settlements
- Competitive Differentiation
 - Asset pricing
 - Risk calculations
 - Liquidity or margins requirements

Have Led to the Demand for...

- Real-Time Processing
 - Processing incoming streaming updates
 - Pulling contextual data
 - Executing complex mathematical models



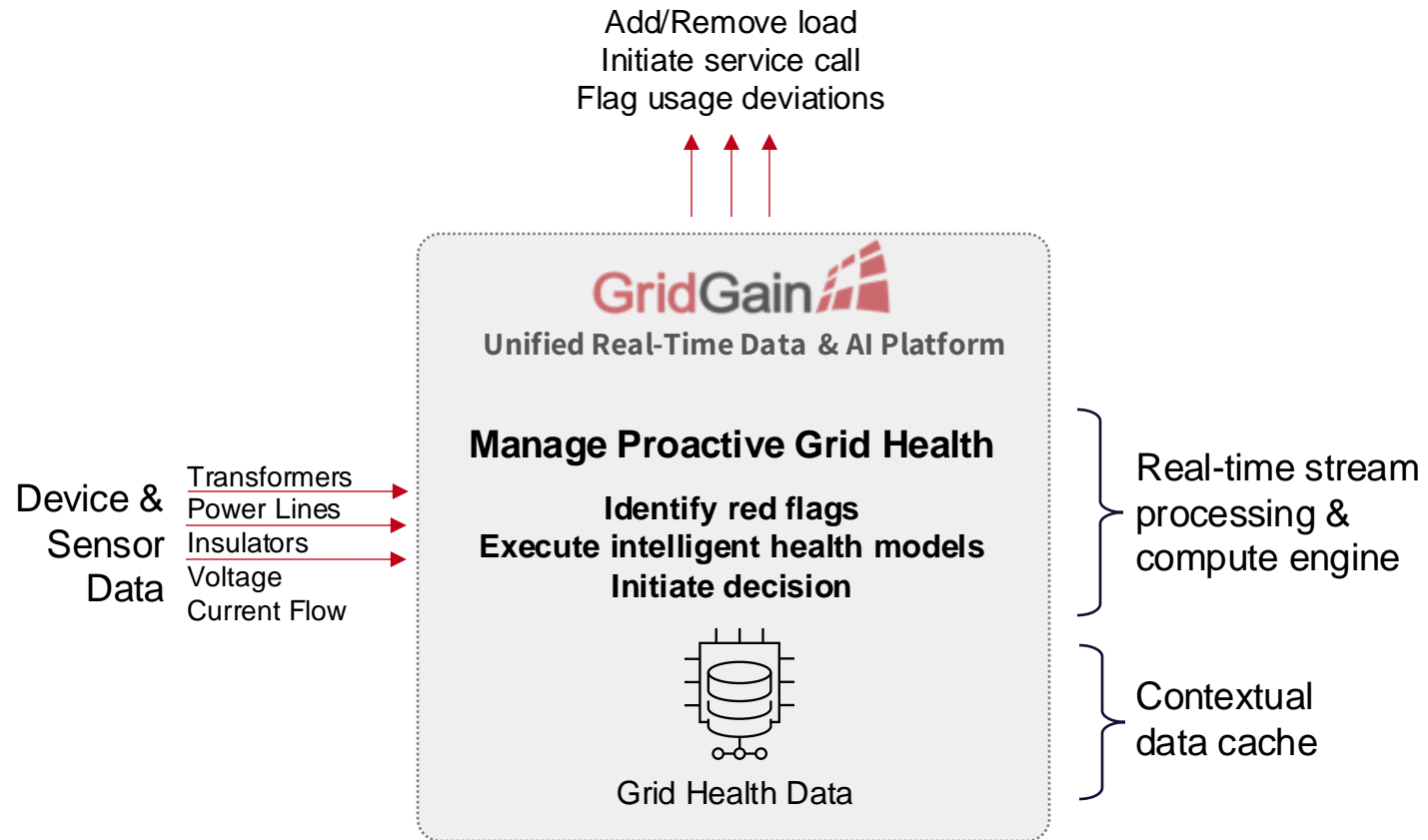
Real-Time Decisions for Efficient Grid Operations



- Power Grid Operators
 - Cannot easily increase total power output
 - Can only minimize outages
 - Efficiently route power to preferred consumers
- Need Operational Efficiencies
 - Deeper visibility into grid health
 - Preventative maintenance
 - Asset management

Turned to...

- Intelligent Grid Management
 - Processing incoming event streams
 - Combining with contextual data
 - Executing smart grid health models
 - Real-time grid health decision making



Credit Card Transaction Fraud Prevention

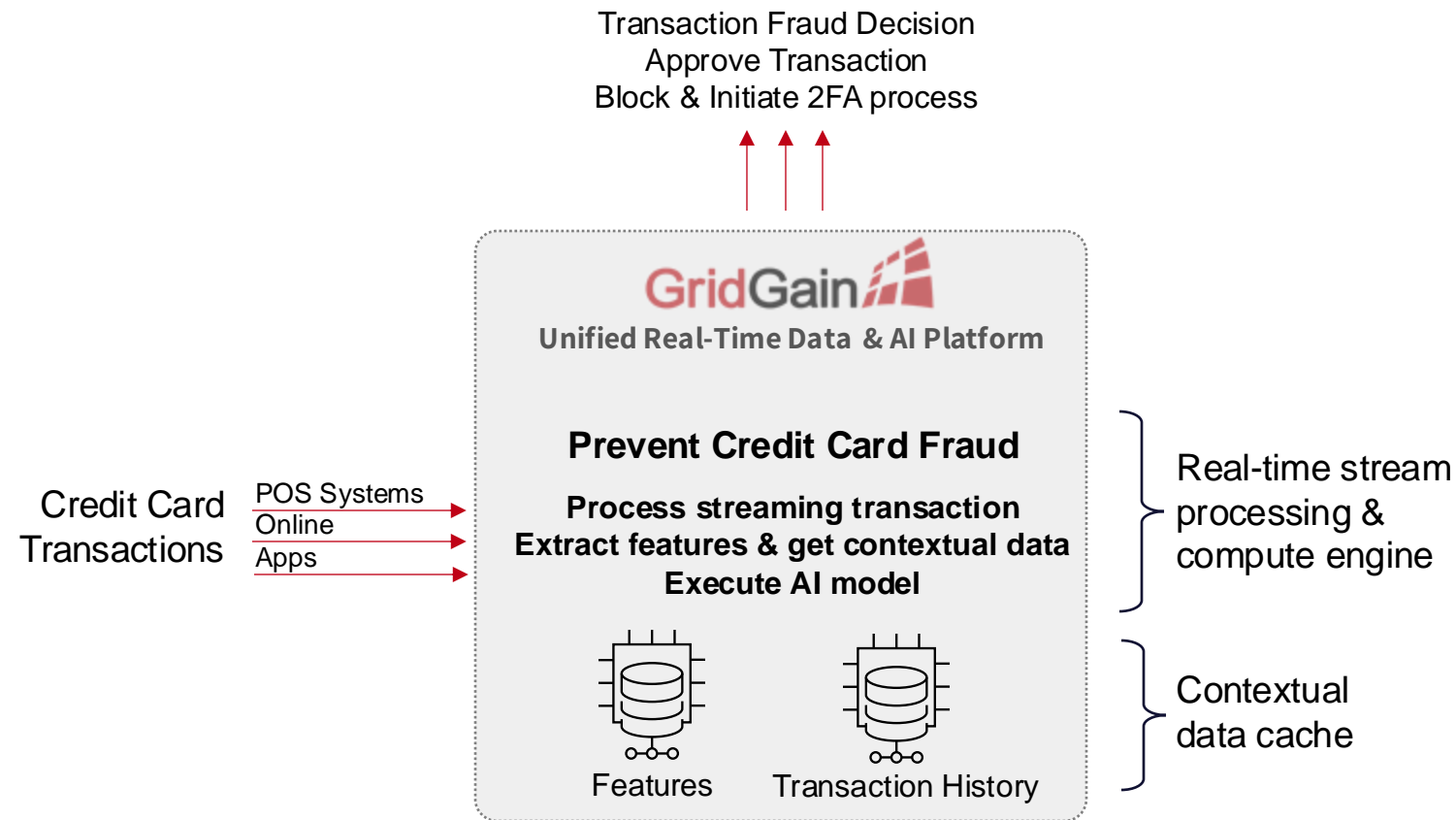


- Credit Card Companies
 - Want to encourage card transactions for all occasions
 - Ensure customers of financial security
 - Minimize their transaction risk exposure

- Want to Detect Prevent Card Fraud
 - Prevention is economical
 - Recovery is expensive and not guaranteed
 - Asset management

By Using AI...

- Detection & Prevention in Real Time
 - Processing incoming card transactions
 - Extract features
 - Execute AI models to detect fraud
 - Initiate preventative action
 - All within the card transaction



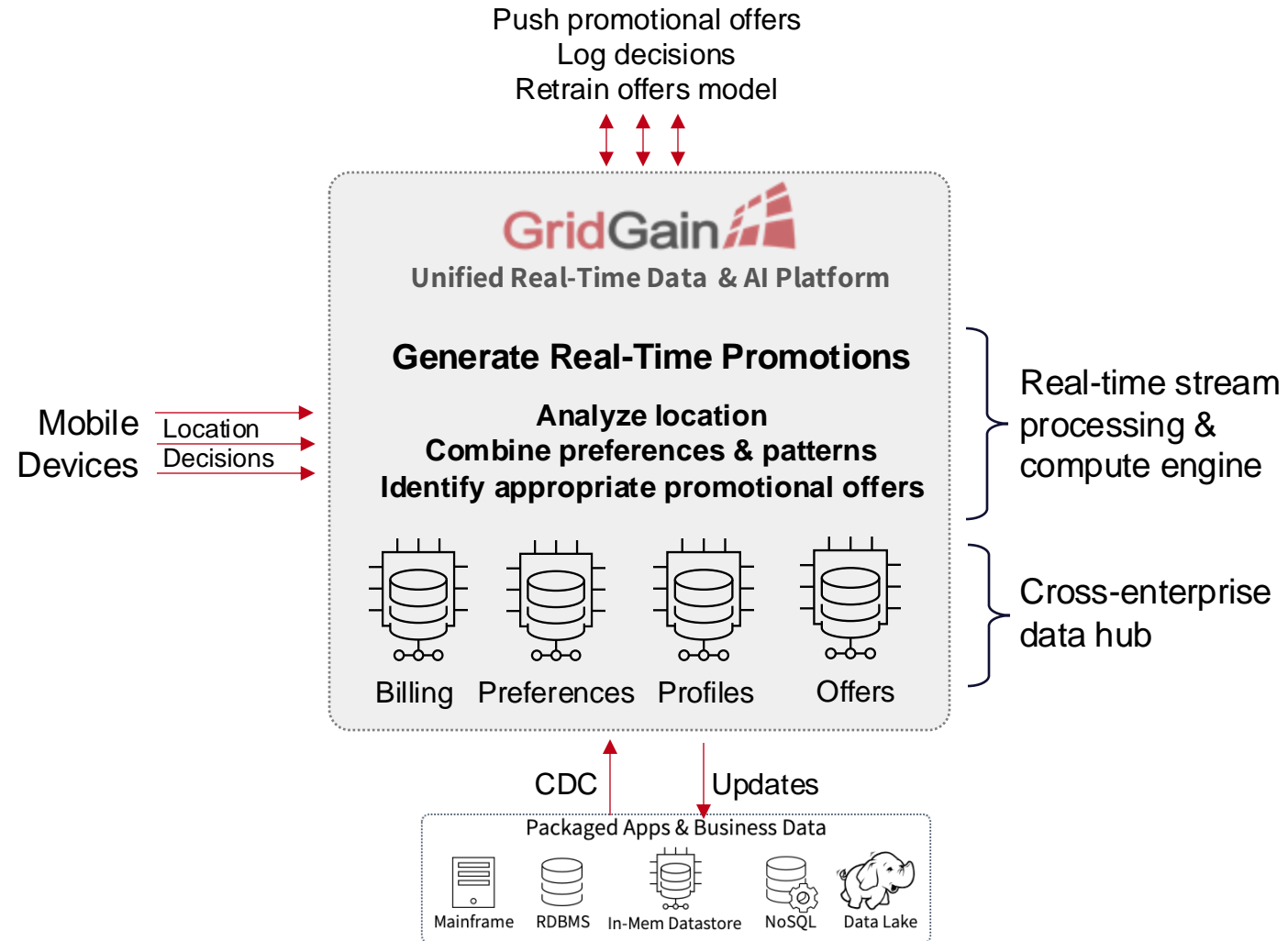
Real-Time Promotions to Mobile Users



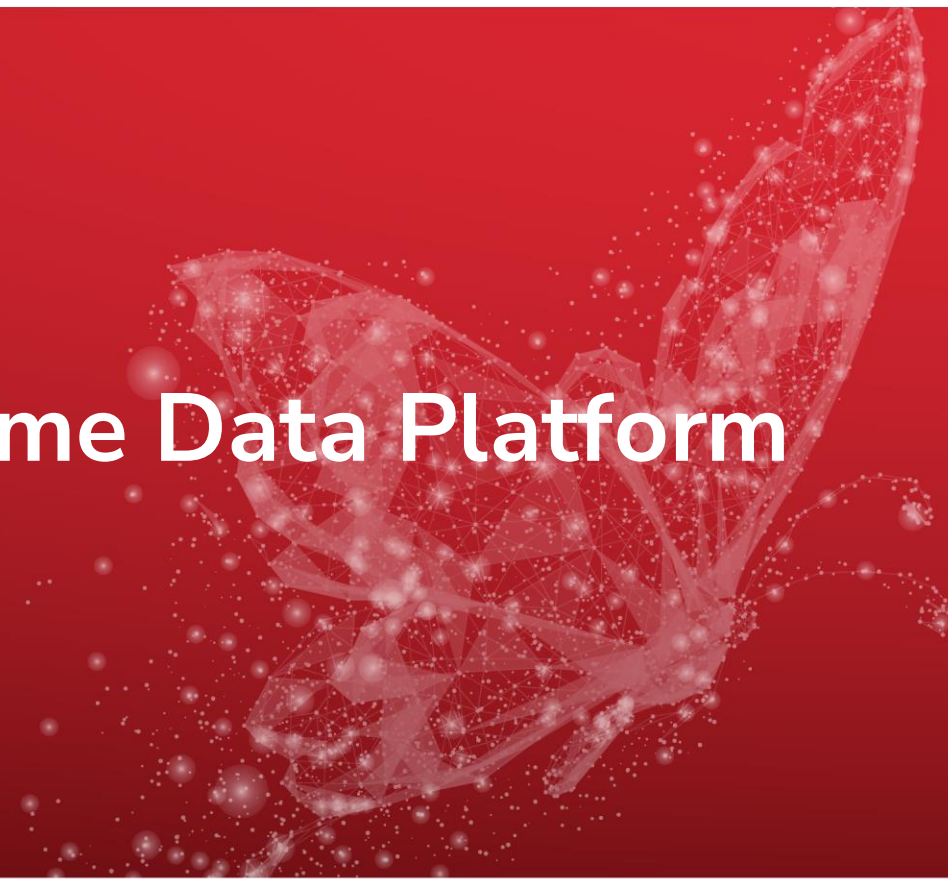
- Meeting Customer Expectations
 - Intelligent engagement with the real world
 - Impulse buying behavior
- Seeking Monetization & Growth Opportunities
 - Location-based analysis
 - Processing customer preferences & usage history
 - Customized promotions & offers

Have Led to the Demand for...

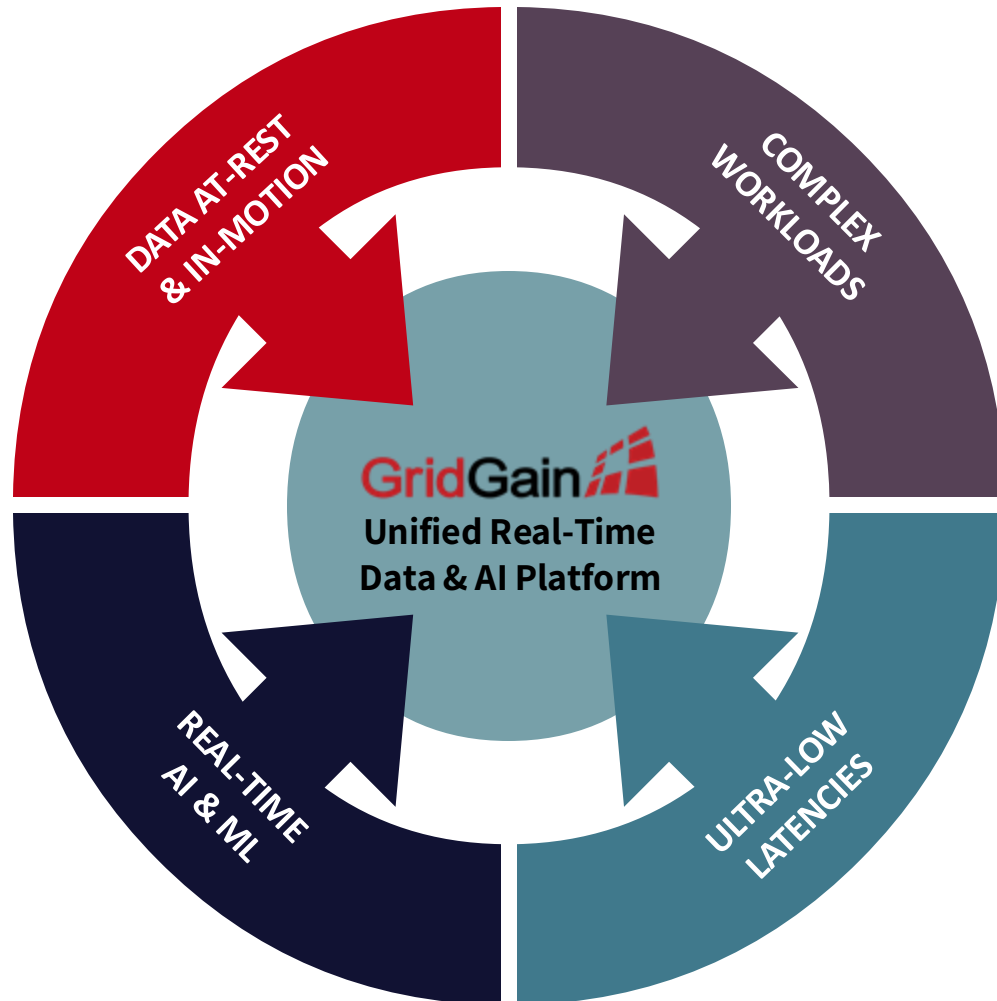
- Unified Real-Time Processing
 - Processing incoming location data
 - Retrieving & processing customer preferences
 - Generating promotions & offers



GridGain - Unified Real-Time Data Platform

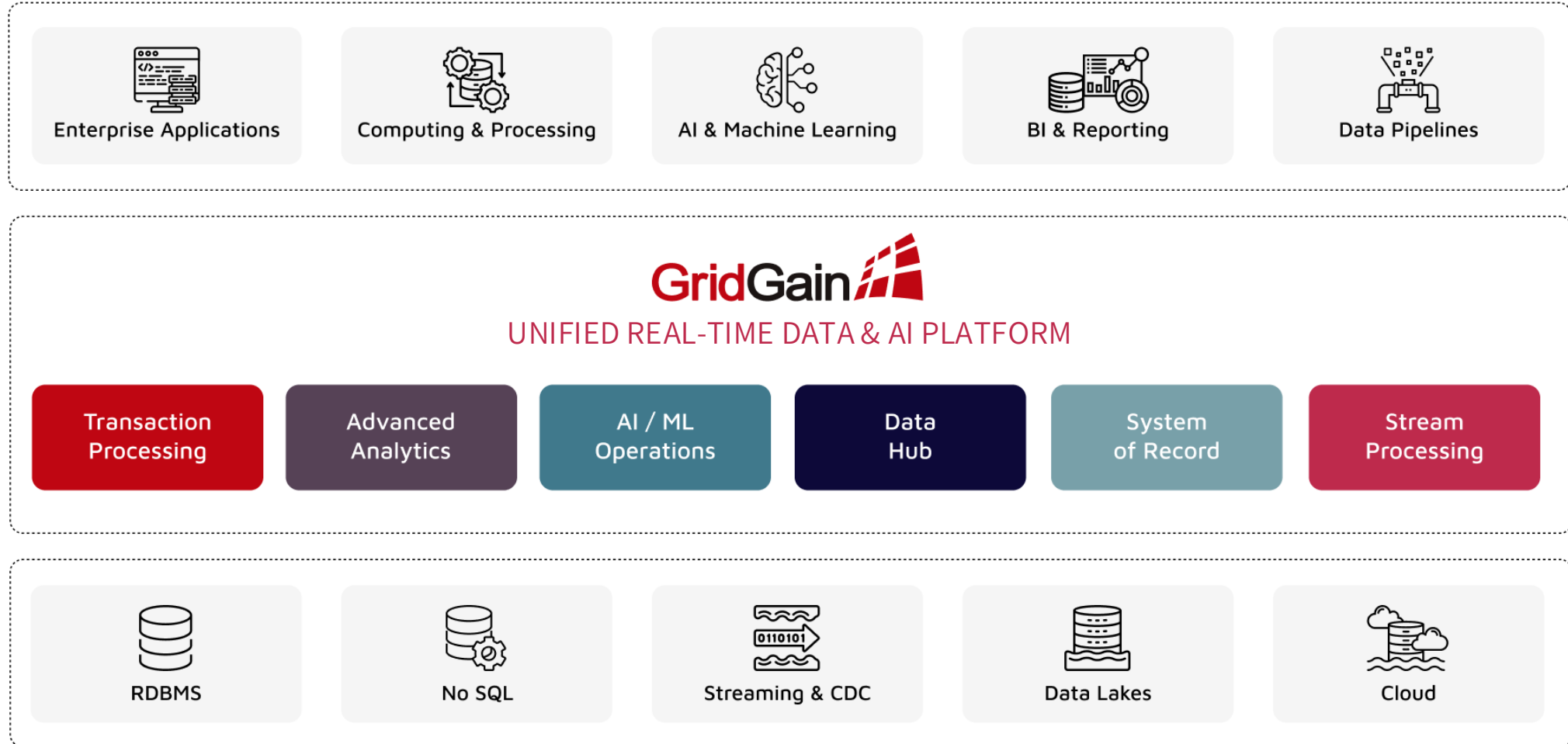


GridGain Unified Real-Time Data & AI Platform



- Stores the data, does stream processing, and can host application logic and various types of analytics
- Addresses multi-dimensional business needs
- Executes complex workloads against streaming and transactional data
- Integrates with multiple systems of record and makes curated data available in real time
- Enables advanced analytics and ML/AI-based decisioning in real time
- Achieves sub-second latencies at massive scale

GridGain – A Simplified Non-Intrusive Architecture

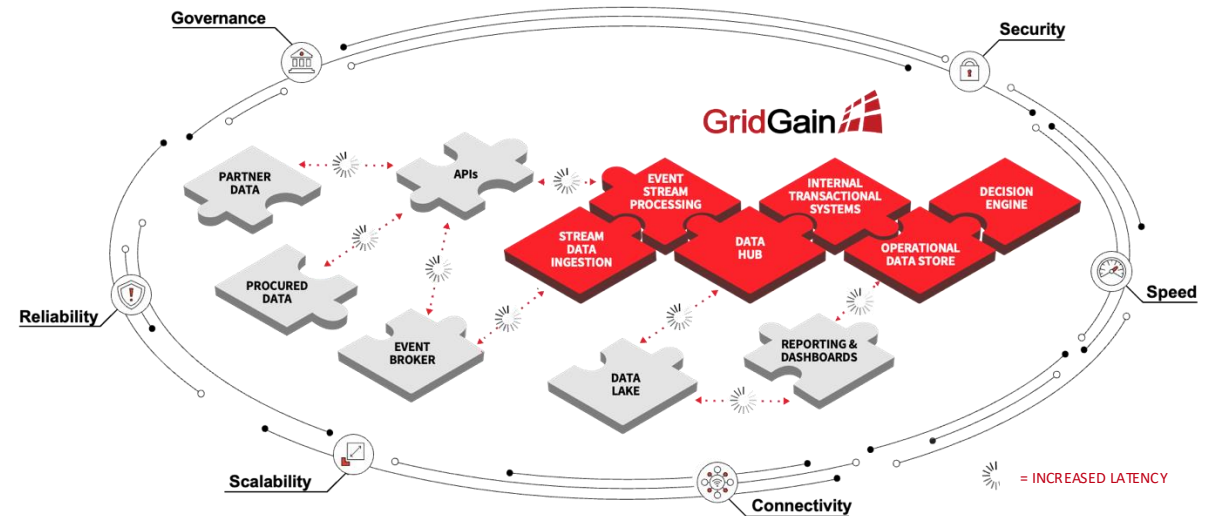
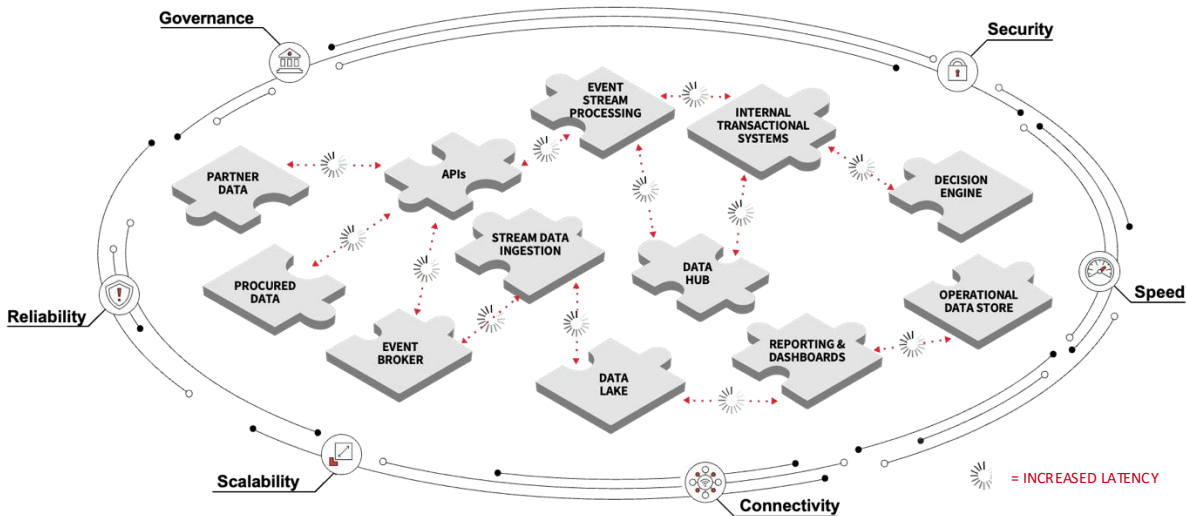


GridGain - Simplifies & Optimizes



- Traditional Enterprise Data Ecosystems
 - Latency across data silos
 - Risk of data loss, quality, and integrity
 - Architectural complexity

- Enterprises with GridGain Unified Real-Time Data Platform
 - Optimizes end-to-end data processing
 - Minimizes latency across the data flow
 - Simplifies your data architecture



Key Takeaways



1 Data driven enterprises need real-time processing

2 Combining streaming and transactional data with historical context and complex computations is imperative

2 Unified real-time data platforms deliver business outcomes while simplifying the enterprise data ecosystems

Thank you!

Lalit Ahuja
CTO
Lalit@GridGain.com
 /in/lahuja