



# Beyond the Bot: The Logical Data Foundation for Agentic AI

Don't Wait... Innovate!



**Inessa Gerber**  
Director of Product Management (NA)



# Yet, for Many, Success Is Elusive: The Challenge Is DATA FOUNDATION!



# Bot Failure: What's the Implication?

Customer Interaction. Personal Experience.

We have **4 people** (2 adults + 2 kids), reservation XXXXX, the Plus Package charges for 2 people only. **Does it cover Crew Appreciation for 2 people ONLY or for ALL 4 people in the cabin?**

The Plus package includes crew appreciation, **which covers gratuities for up to four guests per stateroom.** Therefore, if you have purchased the Plus package, **gratuities for all four people in your cabin are covered.**



**Happy Customer Buys the Package.**



**Confused Customer.**  
**Didn't they say all 4 people?**



**Disappointed and frustrated customer**

- Lost Transaction
- Bad Review
- Lost Trust

## Package Receipt States

Plus Package is applicable to guests **1 & 2** who will receive the following:

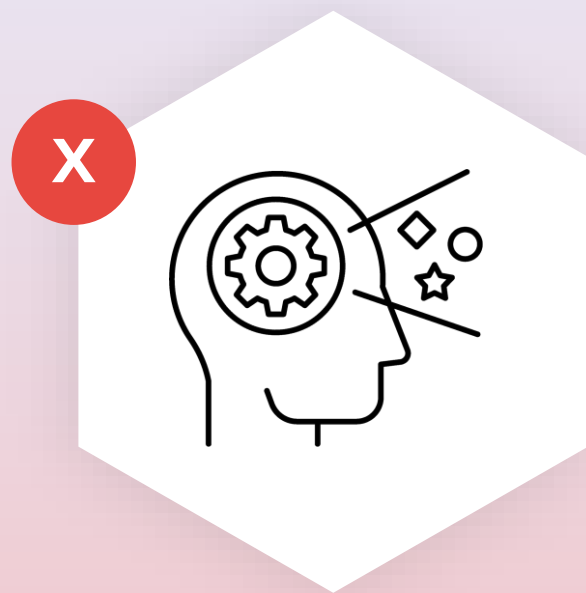
- Crew Appreciation is pre-paid for applicable guests in the cabin.
- .....
- .....

Please **Cancel** the Plus package and issue a **refund**. **Very unfortunate** that your bot provided incorrect information based on your own data.

I have successfully cancelled the Plus package; also, the booking confirmation has been successfully sent.....

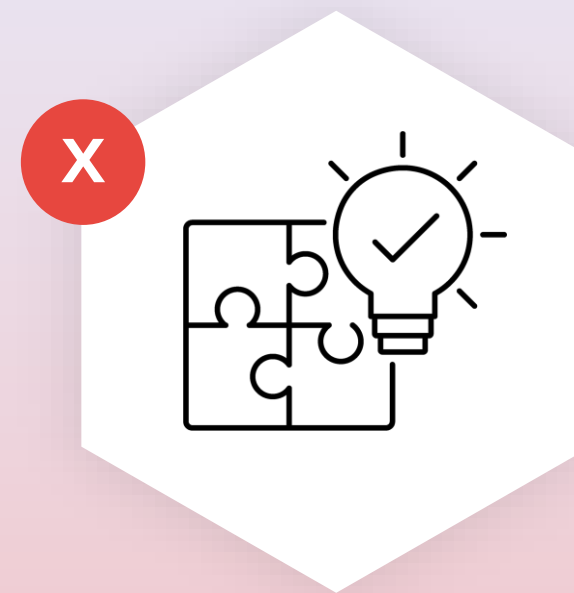
# Why AI Struggles with Data?

AI often fails to deliver consistent business value because it **lacks the foundations** required for trustworthy data delivery.



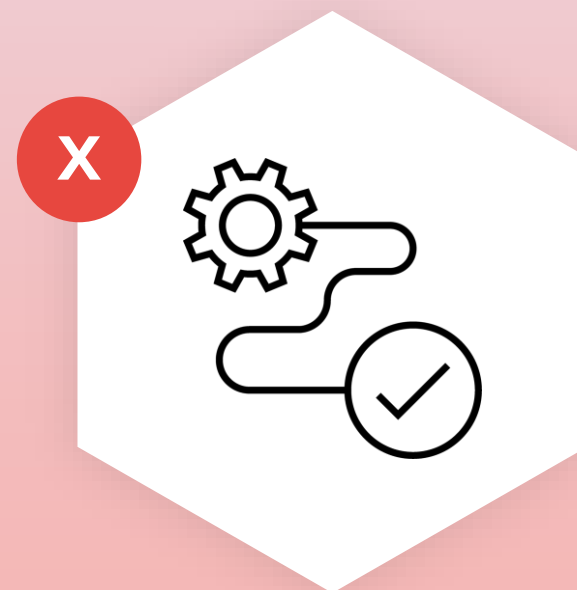
## No live situational awareness

AI lacks real-time context to understand changing business conditions.



## Decisions based on the wrong data

AI relies on incomplete, stale, or misaligned information.



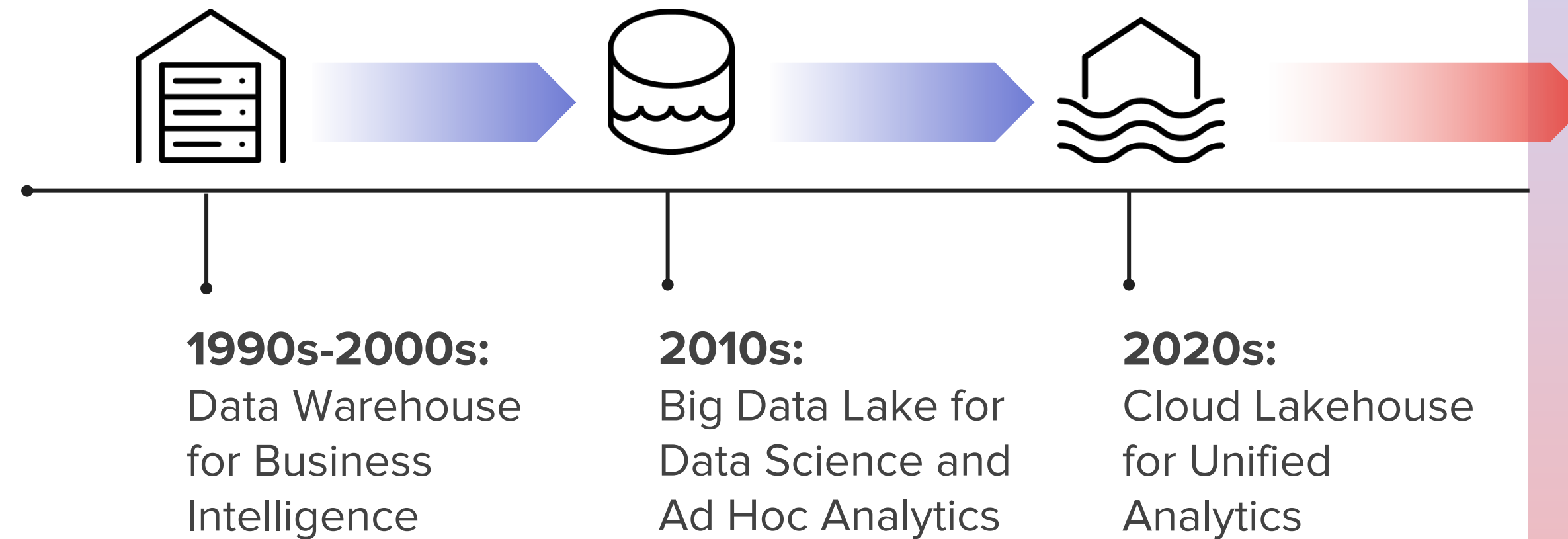
## No enforcement of SLAs or governance

AI operates without consistent business and governance guardrails.



# It's Time to Think Different about Data...

Agentic AI needs a fundamentally different approach



**AI's requirements not met by traditional data management:**

- ⊗ **Perceiving:**  
Live, zero-copy data
- ⊗ **Deciding:**  
Business-contextual semantics
- ⊗ **Acting:**  
Centralized data governance
- ⊗ **Cost & performance**  
optimized for AI

**... across ALL sources**  
(multicloud and on-prem)

# Industry Experts Agree

“Most organizations underestimate the additional data management requirements for agentic AI... Ensuring right-time access, unified accessibility, contextual clarity, active metadata management and robust security to empower agentic AI.”

**Gartner**

*“Use This Checklist to Ensure Your Data Is Ready for the Agentic AI Era”  
20 August 2025*

“Traditional systems — built for structured, transactional workloads — struggle to support the real-time, multimodal demands of various types of modern AI, including generative AI and AI agents.”

**FORRESTER**

*“Multimodel Data Platform: The Missing Layer in your AI Stack”  
13 October 2025*

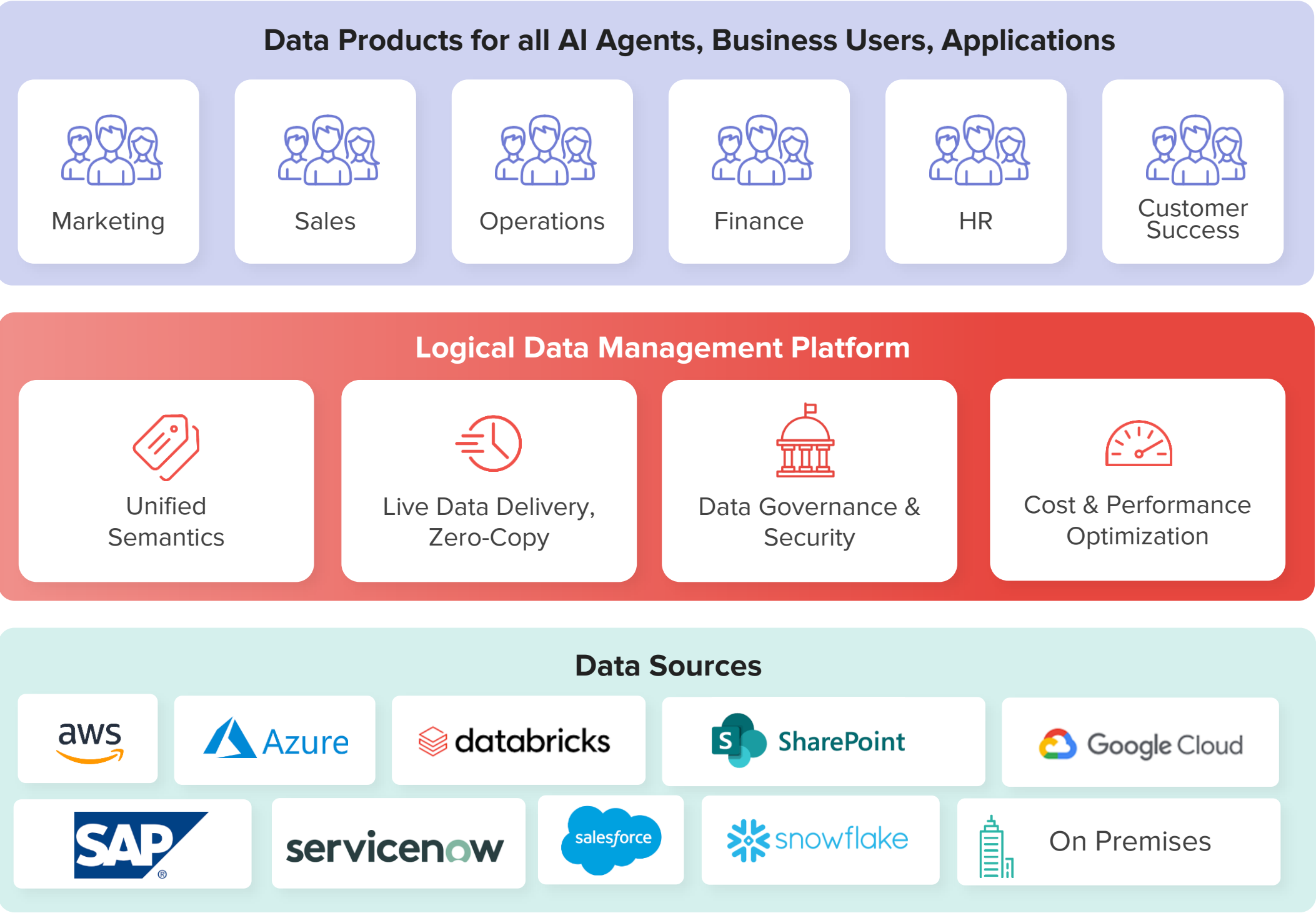
“By 2030, many companies will be approaching “data ubiquity.” Not only will employees have the latest data at their fingertips... but data will also be embedded in systems, processes, channels, interactions, and decision points that drive automated actions.”

**McKinsey  
& Company**

*“Charting a Path to the data- and AI-driven Enterprise of 2030”  
05 Sept 2024*

# Logical Data Management

The Data Foundation for Agentic AI



## KEY CAPABILITIES

- ✓ Live, zero-copy data delivery
- ✓ Consistent business semantics
- ✓ Centralized data governance
- ✓ Cost & performance optimized

... across **ALL** sources  
(multi-cloud and on-prem)

# AI Readiness Framework

---



# Start with Measurable Business Outcomes

AI value starts by anchoring every initiative to explicit, measurable business outcomes—not technology decisions.

- **Most AI initiatives fail** to deliver value because they begin with technology, tools, or committees instead of outcomes
- **Outcomes must be explicit** and measurable (what, how much, by when) to create focus and accountability
- Clear outcomes **create alignment across business, data, analytics, and AI teams**
- When outcomes are explicit, AI initiatives shift from an abstract exercise to a **business-critical activity**



# Business-Led AI Outcomes (e.g. Financial Services)

Leading banks and insurers anchor AI initiatives to measurable, cross-functional business outcomes rather than technology-driven experiments.

## Customer Growth & Retention

Increase customer retention by 5% across priority segments within 12 months.

## Fraud Reduction

Reduce confirmed fraud losses by 20% within 9 months.

## Claims & Processing Efficiency

Reduce average claims (or case) processing time by 25% in 6 months.

## Credit & Underwriting Quality

Reduce credit losses by 10% over the next fiscal year.

## Regulatory & Compliance Risk Reduction

Reduce high-risk regulatory findings by 30% within 12 months.

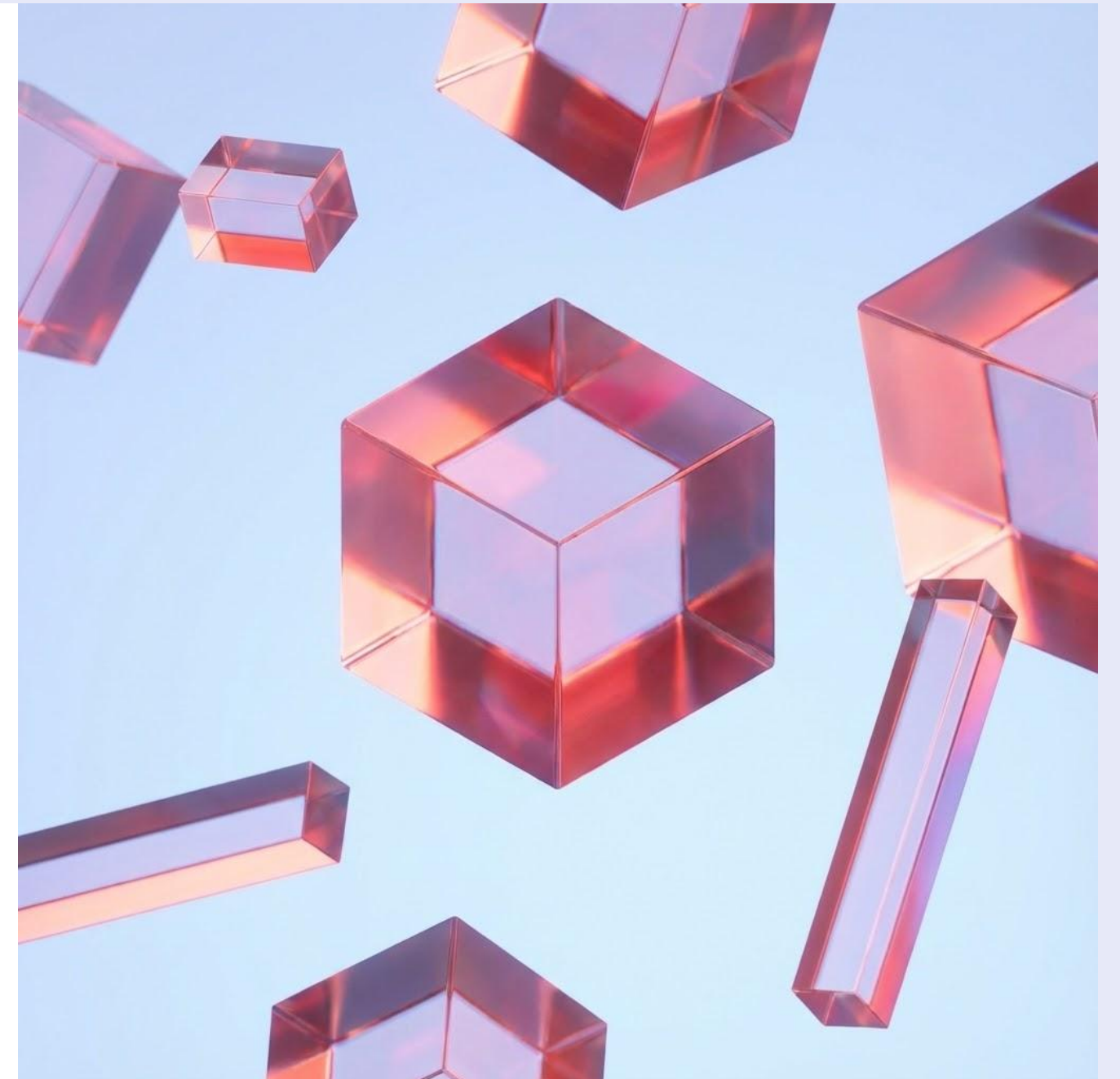
## Time-to-Value for New Products

Reduce time to launch new financial products by 20% within 9 months.

# Identify the Data That Drives the Outcome

Once outcomes are clear, the next step is to identify the data that directly enables and measures those outcomes.

- Outcome-driven scoping narrows **focus to the data that leadership cares about**
- This approach **avoids trying to prepare all data for AI** and instead prioritizes what delivers impact
- AI conversations become **practical and targeted**, rather than theoretical or overwhelming



# Establish a Universal Semantic Layer Across Data and AI

A universal semantic layer provides consistent business meaning across data and AI, enabling trust, governance, and real-time access at scale.

- Creates a shared business language **without physically centralizing data**
- Applies policies, security, and **semantics consistently** across all data sources
- Enables **real-time access** to operational, analytical, and external data
- **Abstracts complexity** to increase speed, consistency, and trust of AI Applications

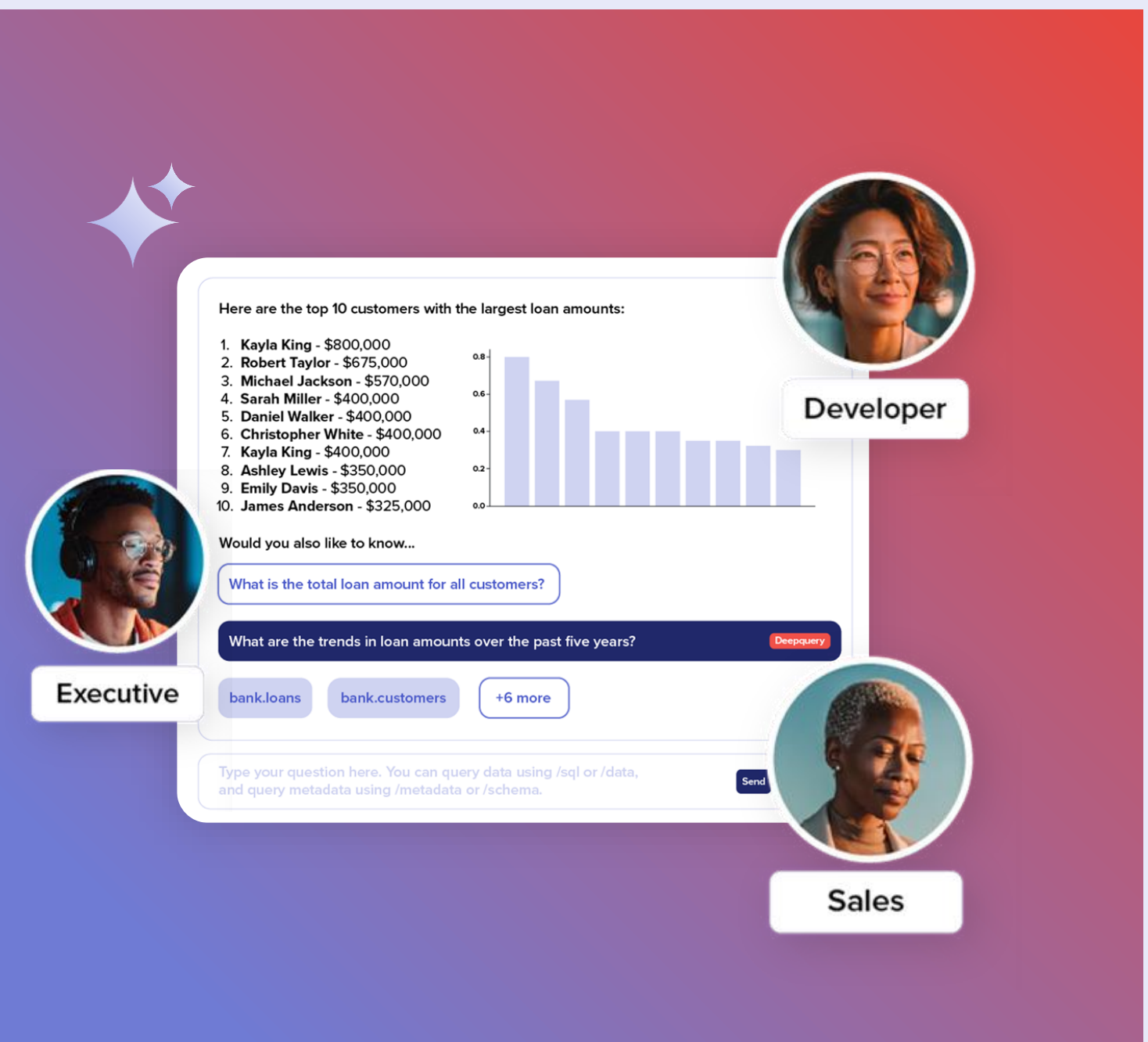




# Data Products for Innovation at Scale

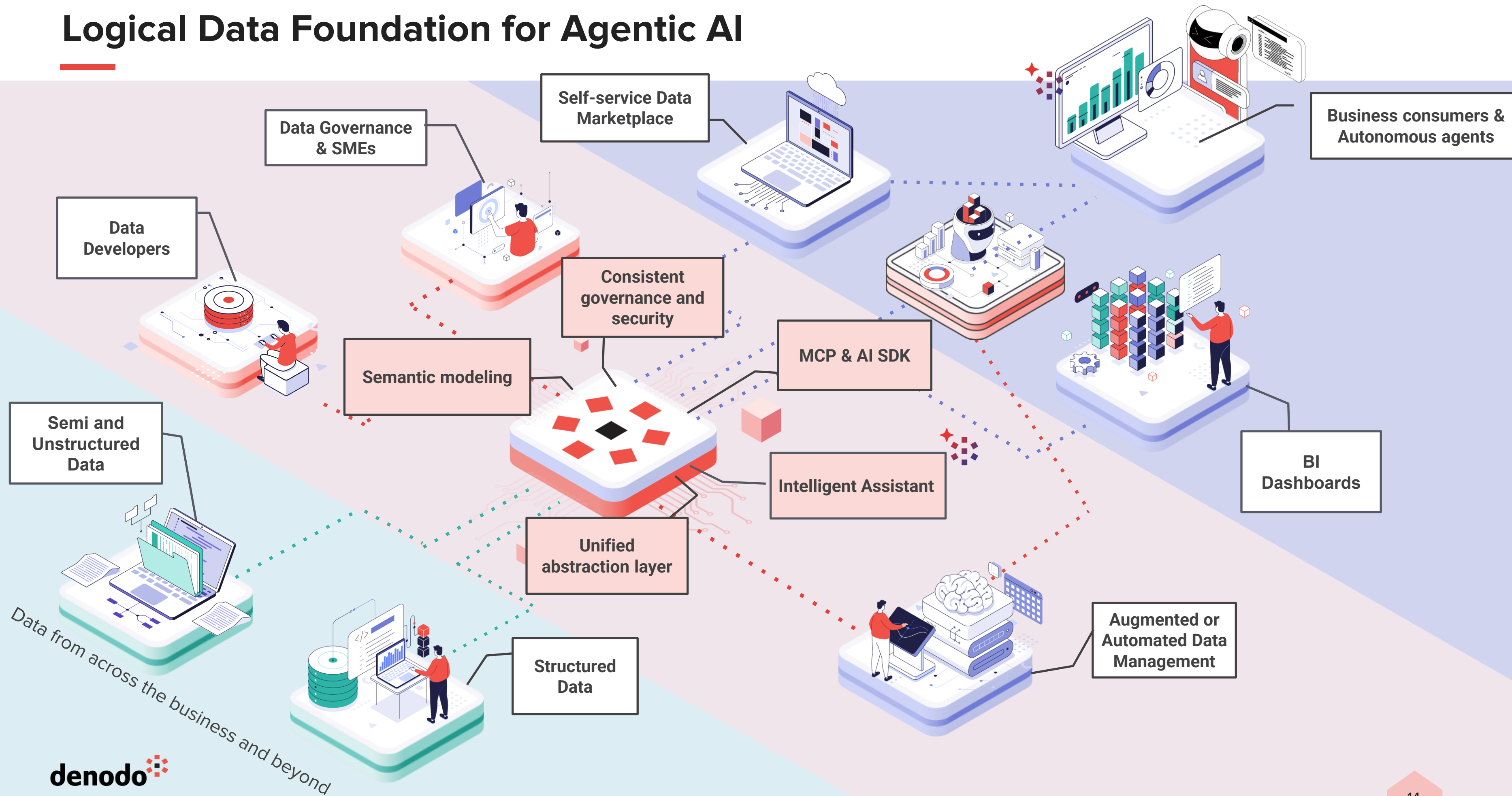
With a logical data foundation in place, teams can create data products that embed governance while remaining easy to build, own, and evolve.

- **Data products** package data, definitions, quality expectations, and policies into **reusable assets**
- **Minimize wait on data experts** to create and maintain trusted data products
- **Ownership is distributed** to the teams closest to the business context, not centralized in a committee
- **Governance becomes embedded** in day-to-day work rather than enforced after the fact



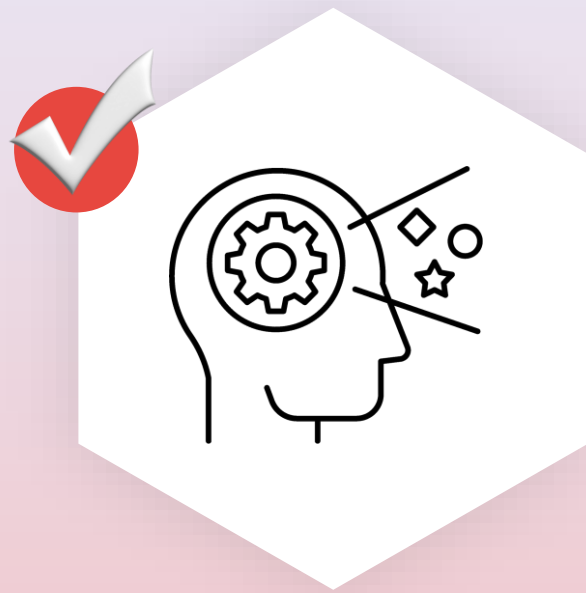


# Logical Data Foundation for Agentic AI

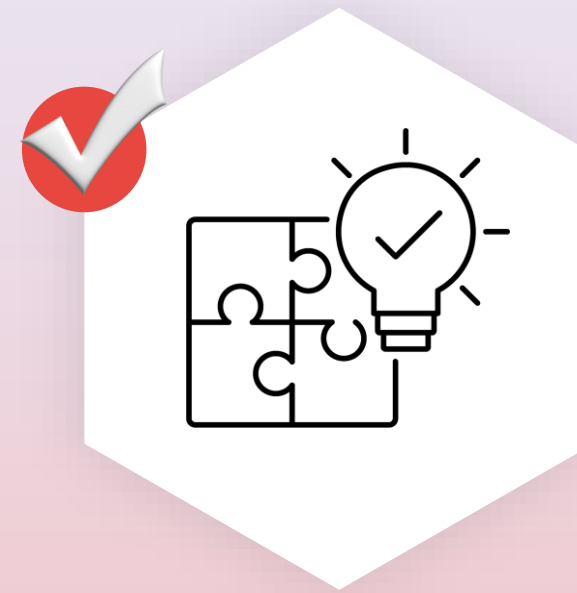


# Don't Wait! Innovate with Trustworthy AI for Business Outcomes

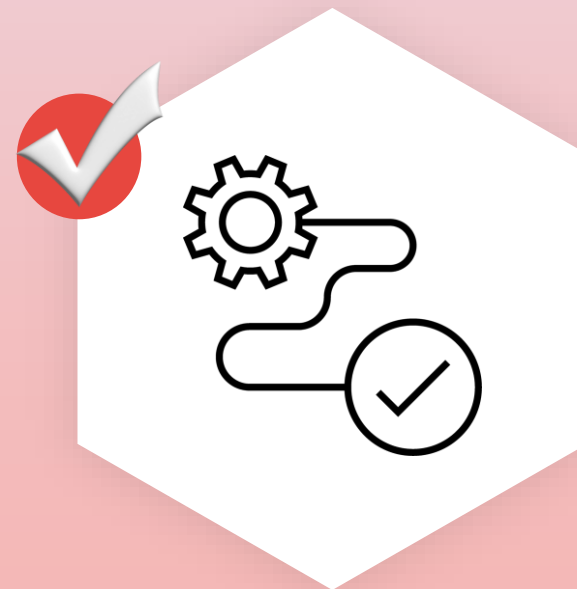
Logical Data Foundation Framework Enables AI Readiness across the Enterprise.



**Live** situational awareness with Real-Time Data Access across ALL enterprise data



The **most relevant information** to make the best decision based on Contextualized Semantics



**Consistent execution** within business SLAs and governance guardrails with centralized federated security model

# Customer Stories

---



# Festo's Innovation Journey: Leveraging GenAI to Transform Industrial Automation

To enhance productivity and customer experience, Festo introduced AI-powered chat applications for intuitive data access. The team created the FestoGPT application, similar to ChatGPT, allowing consultants and other customer-facing staff to ask questions.

## Problem

- **Converting structured data** into text to embed it for LLM use proved **ineffective**
- AI-generated responses often create the **perception of correctness**, even when inaccurate
- **Strict access controls** were necessary to ensure only authorized users could retrieve sensitive information

## Solution

- **Avoid replicating** and embedding entire datasets and instead connecting the LLM only to metadata, to generate queries for relevant data from original source systems through a single API
- Simplify their AI applications' data access via a **single AI interface** instead of building and integrating multiple connectors to multiple source systems

## Results

- FestoGPT and Skillground applications were enhanced with Festo's internal data access, **empowering users to interact with both structured and unstructured data seamlessly.**
- **Eliminated data duplication** and movement, improving data privacy and **reducing storage costs.**
- **Improved Sales performance** and KPI reporting, by customer and project.



# Empowering Employees with Democratized Real-Time Data Access via PC Chat

PC (Perkins Coie) Chat can deliver real-time data across the departments while adhering to the corporate policies and access controls.

## Problem

- **Lack of secure access to the corporate data for the Chatbot.** Lack of SSO support for the older proprietary chatbot application.
- **Lack of ambiguity detection and quality metadata for trusted AI**

## Solution

- **Trusted data foundation:** Enhanced Denodo semantic views provided for centralized data access and high-quality metadata.
- **Secure Data:** Denodo SSO integration for the PC Chat ensured secure real-time data access for the chatbot.

## Results

- **Expanded PC Chat usage across the departments, not only executive teams.**
- **Trusted data delivery with full transparency.**
- Reduced hallucinations and improved query accuracy based on semantics.
- Enhanced efficiency and revenue growth for legal and client services staff, providing a competitive edge.

# Perkins Coie “PC Chat” with Denodo AI SDK

## FEATURES

# INSIDE PC CHAT:

Developing a Custom AI Chatbot with our AI Stack

BY ABEL GALINDO

### WHY WE BUILT PC CHAT

The legal profession faces mounting pressure to modernize operations while upholding the highest standards of client service, confidentiality, and security. Our firm recognized that traditional approaches to information management were limiting our ability to grow. The need for instant access to case precedents, regulatory updates, document analysis, and internal knowledge had reached a point where manual processes could no longer meet our stakeholders’ needs.

Key drivers behind the decision to build the PC Chat included:

- **Competitive Advantage:** positioning the firm as a leader in legal technology adoption
- **Attorney Productivity:** reducing time spent on routine information retrieval so attorneys can focus on high-value legal work and client relationships
- **Proprietary Knowledge:** unlocking decades of institutional expertise, case histories, client matter insights, and legal know-how, and making it accessible to everyone on the team
- **Eliminating Information Silos:** consolidating fragmented knowledge across SharePoint, case management systems, and external data into a single, unified interface via Denodo data virtualization
- **Strong ROI:** projecting measurable time savings in document drafting, research, client response, and administrative tasks

### INTEGRATION WITH OTHER DATA SOURCES VIA DENODO

The firm uses Denodo as its data virtualization platform, enabling seamless access to multiple heterogeneous data sources through a single logical layer. To connect

these data assets to PC Chat, we leverage the Denodo AI SDK to develop APIs, which are then consumed through Semantic Kernel plugins, the same pattern used for all other integrations. A key implementation detail was configuring AI-specific instructions in

both the PC Chat (OpenAI model) configuration and on the Denodo side to ensure correct interaction with exposed data and APIs. As Denodo continues to evolve, these configuration steps are expected to become more streamlined.

### ROI AND BUSINESS IMPACT

#### Cost Efficiency

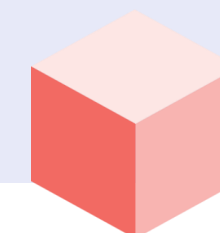
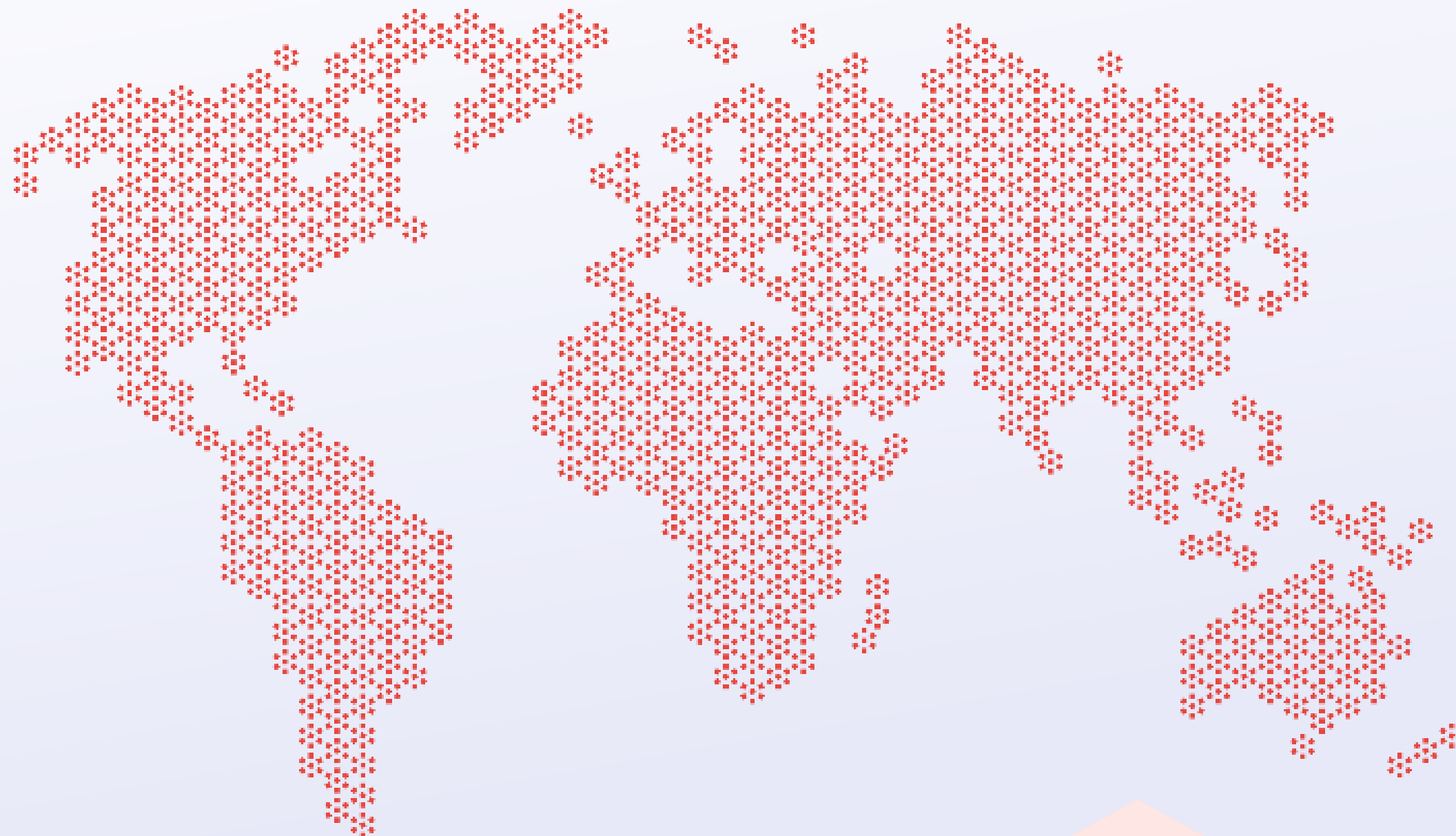
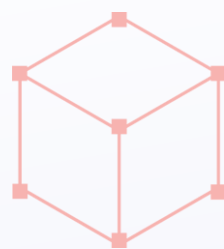
Building PC Chat internally has delivered immediate and measurable cost savings. Operating costs, primarily LLM usage, lightweight infrastructure, and maintenance amount to a fraction of what comparable third-party tools would cost on a per-seat licensing model. By owning the platform, we shifted from fixed licensing fees to variable, usage-based costs, significantly reducing the total cost of ownership.

#### Data Security and Governance

PC Chat operates entirely within our approved security boundaries. Sensitive firm data is never exposed to third-party vendors or external training pipelines. This translates directly into lower risk exposure, stronger data governance, and greater confidence that our intellectual property remains protected.

#### Productivity Gains

The most visible impact has been on day-to-day productivity. PC Chat enables users to complete information retrieval tasks, document summarization, query generation, and operational questions significantly faster than before. Even modest time savings per interaction compound quickly at scale, equating to thousands of hours saved annually and reduced reliance on manual research across teams.



# Thanks!



[www.denodo.com](http://www.denodo.com)

[info@denodo.com](mailto:info@denodo.com)

© Copyright Denodo Technologies. All rights reserved

Unless otherwise specified, no part of this PDF file may be reproduced or utilized in any for or by any means, electronic or mechanical, including photocopying and microfilm, without prior the written authorization from Denodo Technologies.