

# Data Infrastructure: The Value-Creation Layer of the AI Stack

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# Executive Summary

## What is Data Infrastructure?

The software layer above where data is physically stored, turning raw information into reliable, actionable and enterprise usable data

## Why This Matters?

Allows companies to make decisions quicker and automate work, improving margins and converting AI spend into tangible results

## M&A Implications

Demand for fewer vendors is accelerating consolidation in a fast growing market, concentrating value and creating winners and losers similar to the dot com era

# Path From Data Creation Into Actionable Insights

## Data is the New Asset and Enterprises Generate Massive Volumes

Generating more raw information across operations, customers, and machines as digital and AI adoption accelerates



## Digital Infrastructure Physically Stores and Moves the Data Created

Provides the compute, storage, and connectivity required to house data and make it accessible at scale



## Data Infrastructure Converts Inputs Into Usable State

Standardizes data, controls access, and prepares it for enterprise systems

# Modern Data Stack Creates Control Points With Sub-Verticals

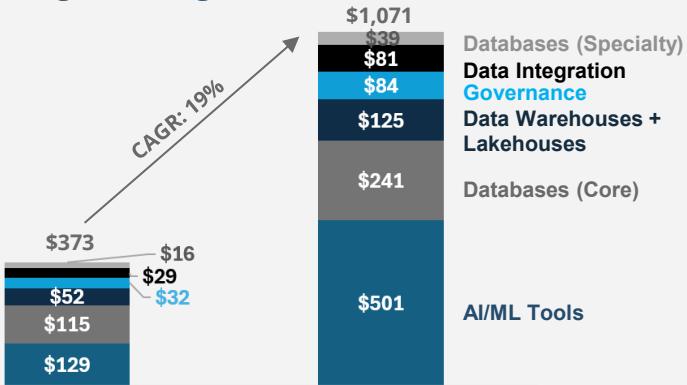


Sub-Vertical	What is the Problem Solved?	How Does This Create Value?
Ingestion	<ul style="list-style-type: none"><li>Moves data from original systems into centralized storage</li></ul>	<ul style="list-style-type: none"><li>Feeds downstream teams with current data without need of re-platforming</li><li>Becomes anchor for tools to depend on</li></ul>
Storage and Lakehouse	<ul style="list-style-type: none"><li>Centralizes structured/unstructured data into a single repository for workloads</li></ul>	<ul style="list-style-type: none"><li>Supports scale without linear cost increase</li><li>Preserves data as long-term asset</li></ul>
Transformation	<ul style="list-style-type: none"><li>Cleans, models, and prepares raw data into analytics ready datasets</li></ul>	<ul style="list-style-type: none"><li>Eliminates constant reconciliation of data</li><li>Makes outputs repeatable by defining information to be used later in querying</li></ul>
Query and Complete	<ul style="list-style-type: none"><li>Allow teams quickly analyze large amounts of data at scale</li></ul>	<ul style="list-style-type: none"><li>Increases data usage across enterprise</li><li>Converts stored data into faster real-time business insights</li></ul>
AI enablement	<ul style="list-style-type: none"><li>Makes data usable for machine learning models and AI applications</li></ul>	<ul style="list-style-type: none"><li>Shortens gap between data access and dependable LLM operations</li><li>Reduces failure rates and hallucinations</li></ul>
Governance	<ul style="list-style-type: none"><li>Ensures regulatory compliance through safe access to enterprise data</li></ul>	<ul style="list-style-type: none"><li>Data sharing at large scale</li><li>Reduces legal and security exposure</li></ul>

# Market Overview

## Market Size (\$ in Billions)

**Businesses rely more on data to operate and compete, driving strong market growth**



**2024A**  
**90x**  
Increase in Data Created Annually from 2010 to 2025

**2030E**  
**80%**  
Of Global Data Created by Enterprises by 2028 Versus 60% in 2023

**\$496.8B**  
By 2035 Data Center Market Is Projected to Expand Driven by Cloud Computing Demand

**3.5x**  
From 2025 to 2030 AI Workloads Require Increase in Gigawatt Supply

**\$5.2T**  
Required CapEx Investment by 2030 to Support AI Compute Infrastructure

## Themes Driving Investment

- Companies consolidate around fewer platforms to simplify operations, lower total cost, and speed execution across teams



- Platforms that own multiple parts of the workflow expand in relevance and spend as usage grows across the organization

- Consistent data enables dependable reporting and decisions that directly support revenue and customer experience



- As data supports more automated workflows, companies require systems that enforce accuracy, permissions, and uptime by design

- Platforms embedded as the source of trusted data become harder to replace and expand in value as business reliance increases

## AI Enablement



- Isolated datasets waste resources by lacking consistency, limiting model accuracy, increasing hallucination risk

- Clean data enables repeatable results, reliable inference, and scale from experimentation into operational workflows that reduces labor cost and time

- Platforms above AI workflows capture more activity as companies move from pilots to core operations

# Sustained AI CapEx Forces Infrastructure Scaling

AI workloads widening gap between non-AI workloads

Imbalance creates demand for balance between usability and capacity

Data centers expand capacity

AI spend without infrastructure breaks systems i.e. a bike with a jet engine

Infrastructure compounds capacity into value

Compute growth is worth less without scaling supporting systems  
Capital currently outpaces operational readiness

Company	2025 CapEx	YoY Inc. %
Alphabet	\$82.4B	57%
amazon	\$117.0B	41%
apple	\$12.7B	35%
Meta	\$72.2B	94%
Microsoft	\$91.3B	42%

# Current Headwinds for AI Investment

## Key Risks

### Heavy CapEx Requirements Don't Justify Returns

- AI infrastructure requires asset-heavy upfront spend, while only a few companies have realized tangible earnings stemming from AI spend
- Present day investment case is underwritten on expected demand growth rather than proven workloads

### Energy and Grid Restraints Obstacles to Growth

- Power demand exceeds existing grid, creating strain and limiting development
- Energy projects require long lead times, increasing risk as tech companies become involved in energy sourcing

### Financial Engineering and Transparency Risk

- SPVs and non-recourse financing limit risk, reduce visibility into debt exposure and return profiles for investors

## Why Long-Term Fundamentals Remain Intact

### Earnings Lag Adoption in Every Compute Cycle

- Early buildouts show weak near-term profitability as capacity is built ahead of demand, with returns improving as utilization scales and workloads mature

### Capital Constraints Drive Consolidation

- High capital requirements favor well-funded platforms, accelerating consolidation as undercapitalized vendors struggle

### Infrastructure Bottlenecks Attract Policy and Capital

- Power constraints historically trigger regulation support, private capital deployment and accelerated investment

### Risk Properly Allocated With Sophisticated Buyers

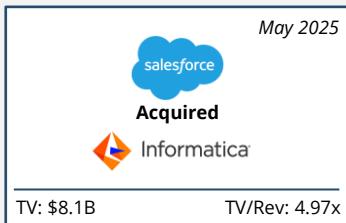
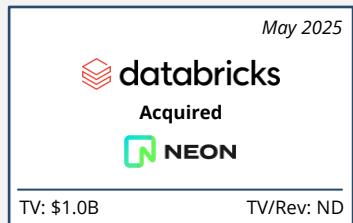
- Non-recourse financing isolates project risk, underlying returns are still supported by creditworthy parties

# Data Infrastructure Tracks the S&P With Higher Volatility

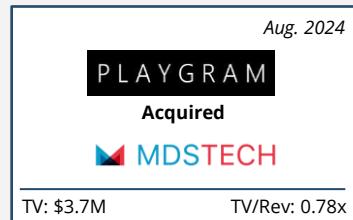


# M&A Activity and Public Market Valuations

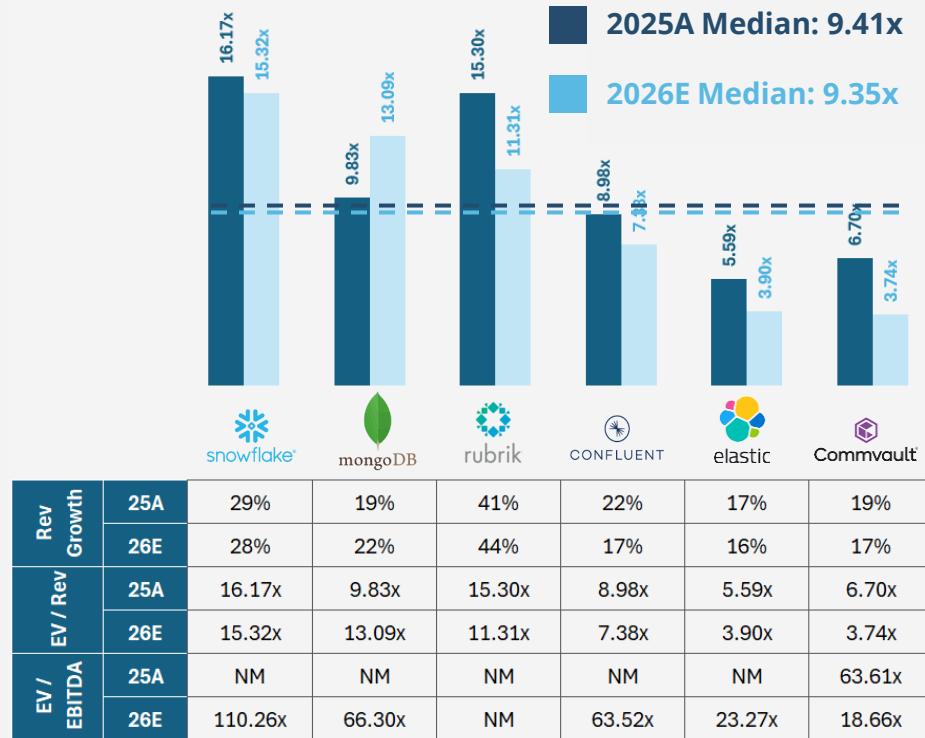
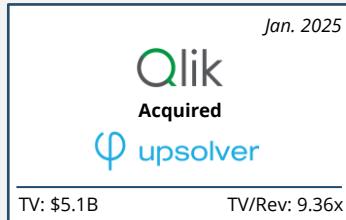
## Platform Expansion



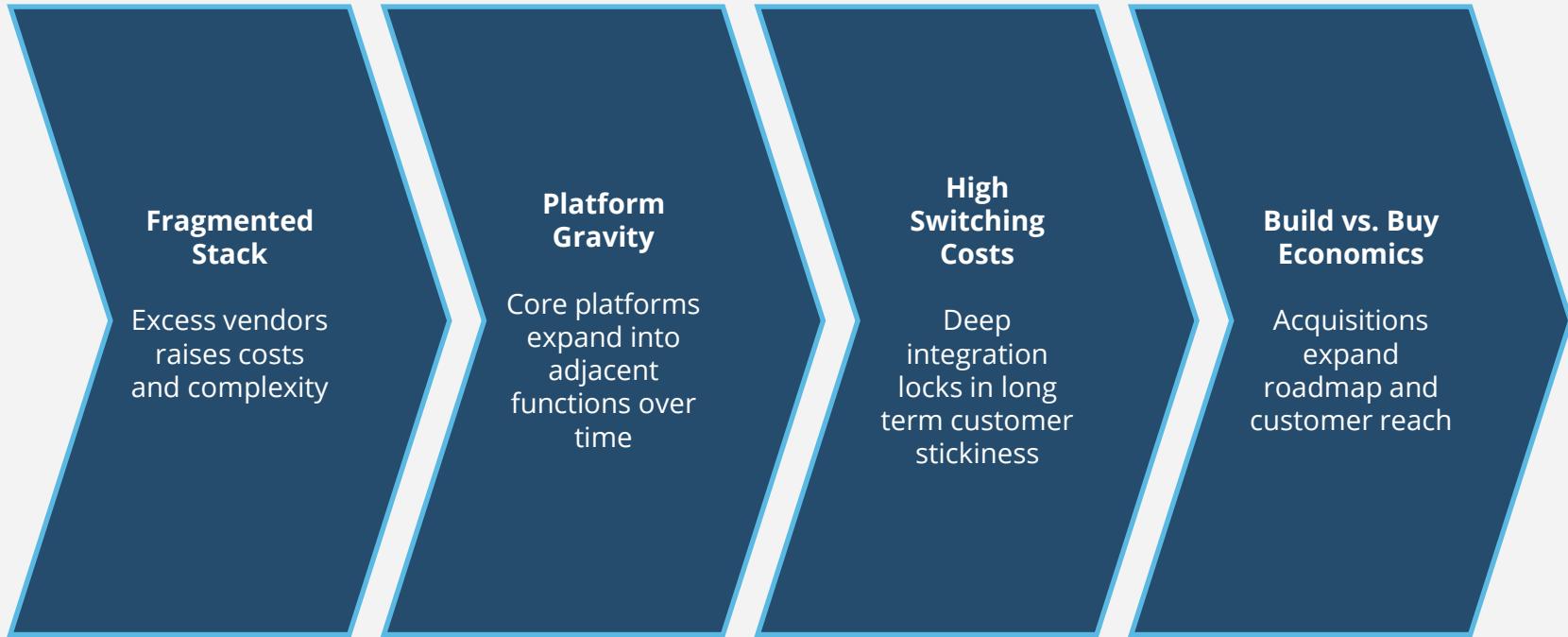
## Vertical Data and Operational Software



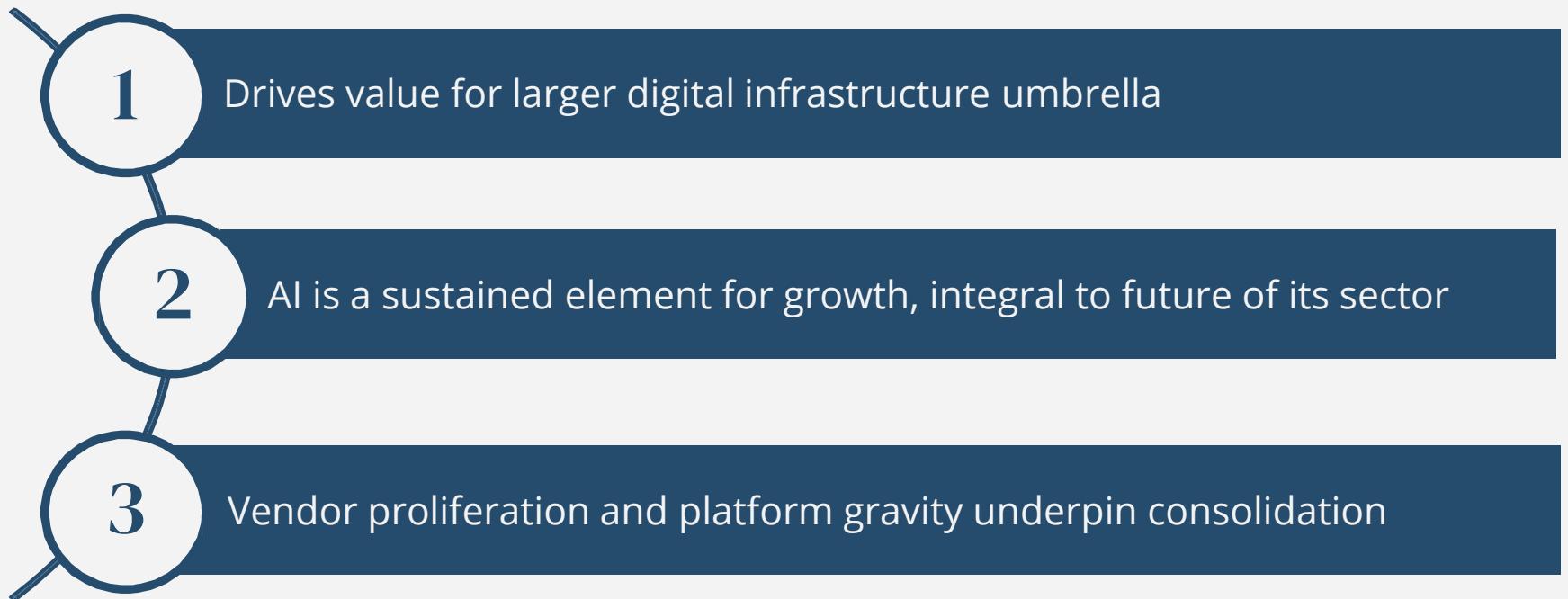
## Sponsor-Led Consolidation



# M&A Creates Path Towards Integrated Platforms



# Data Infrastructure: Key Takeaways

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- 1 Drives value for larger digital infrastructure umbrella
  - 2 AI is a sustained element for growth, integral to future of its sector
  - 3 Vendor proliferation and platform gravity underpin consolidation