BUILDING THE PILLARS OF
A MODERN DATA STRATEGY

Migrate and Modernize Your Data with Tredence and Databricks

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1 CREATING A SOLID DATA FOUNDATION
FOR ANALYTICS AND ARTIFICIAL INTELLIGENCE

Enterprises are racing to modernize their data to build the analytics, artificial intelligence (AI), and Generative AI capabilities they need to compete in the global marketplace. Companies have a wealth of data, but it's trapped in legacy systems, creating silos. In addition, enterprise data warehouses (EDWs) can't keep up with the growth of multi-modal data and the new use cases that teams want to enable. Lagging data practices increase reporting and decision-making delays, increasing costs, business risks, and human errors.

By migrating data to cloud-based, scalable solutions, enterprises generate more insights, increase responsiveness to new market demands. They develop data-driven products and services, personalize marketing, and improve operational efficiency, powering growth.

Chief data officers (CDOs) and business executives demand generative artificial intelligence (GenAI) and advanced analytics to accelerate business value and unlock predictive capabilities, which siloed legacy systems can't enable—but modern infrastructure can.

95% of decisions:
That currently use data will be at least partially automated by 2025.[1]

[1] "Striving to Become a Data-Driven Organization? Start With 5 Key D&A Initiatives," article, Gartner, undated, https://www.gartner.com/en/information-technology/insights/data-and-analytics-essential-guides

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This eBook provides a blueprint that enterprise IT, data, and business teams can use to migrate and modernize their data to effectively leverage analytics, GenAI, and automation to outperform their peers.

Tredence and Databricks have developed an end-to-end process that accelerates time to value while reducing risks and costs, enabling enterprises to achieve business value and progressively unlock greater ROI by enabling more use cases.

Enterprises leverage Tredence's seven-step Migrate to Modernize framework and the Databricks Data Intelligence Platform to move data from outdated systems to cutting-edge, cloud infrastructure; enable real-time data streaming; and curate data sets at different levels for user consumption. With Tredence and Databricks, enterprises democratize data and analytics use, enhance collaboration across teams and partners, and maintain governance and security over their data holdings.

[2] Justyna Bak, "Big on data: Study shows why data-driven companies are more profitable than their peers," report findings, Google Cloud, March 24, 2023, https://cloud.google.com/blog/transform/data-leaders-more-profit-able-innovative-hbr-data

Data-Driven Businesses Outpace the Rest

According to _Google Cloud and Harvard Business Review_, companies that invest in data and analytics capabilities outperform their peers in driving functional improvements and business outcomes.[2]
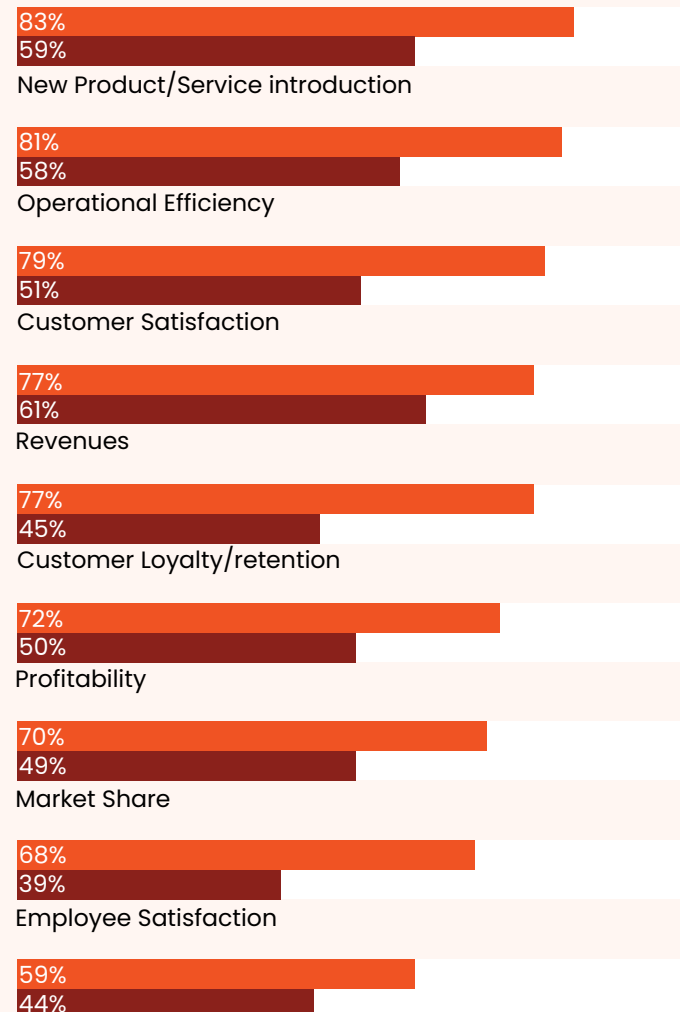
LEADERS STRESS INTRODUCING THE NEW

Their performance shined compared to others on new product and service introductions

To what extent has your organization's performance in each of the following areas changed over the last year?

[PERCENTAGE OF RESPONDENTS INDICATING THAT PERFORMANCE SIGNIFICANTLY OR SLIGHTLY INCREASED]

Leaders | **All Others**

83%
59%
New Product/Service introduction

81%
58%
Operational Efficiency

79%
51%
Customer Satisfaction

77%
61%
Revenues

77%
45%
Customer Loyalty/retention

72%
50%
Profitability

70%
49%
Market Share

68%
39%
Employee Satisfaction

59%
44%

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2 ENTERPRISE DRIVERS FOR INVESTING IN DATA MODERNIZATION

Enterprise leaders strive to modernize data, empowering teams with data and analytics they use to drive continual process improvements.

54% of organizations are planning to implement or are implementing Data Mesh.

BARC 2023[4]

KEY DRIVERS INCLUDE

ANTICIPATING CHANGING MARKET DEMANDS

CREATING REAL-TIME INSIGHTS:

In today's fast-paced business environment, enterprises demand up-to-date, comprehensive data to make timely decisions. Marketplace change has accelerated, and business users must make real-time decisions. Teams harness prescriptive insights to improve efficiency and reduce costs, delivering competitive advantages.

INCREASING COMPETITIVE ADVANTAGE:

Companies that leverage advanced analytics and AI capabilities can identify opportunities faster than competitors. They can exploit emerging market opportunities to drive ROI and position themselves as leaders in their respective industries.

INCREASING OPERATIONAL EFFICIENCY

REDUCING COSTS:

Legacy enterprise data warehouse systems often create inefficiencies and incur high maintenance costs because they are built on unscalable foundations.

Modern architectures like the Databricks Data Intelligence Platform optimize resource utilization, leading to significant cost savings.

STREAMLINING PROCESSES:

Automation and improved enterprise workflows reduce manual interventions and errors, enhancing overall productivity.

Modern tools enable teams to focus on high-value tasks rather than routine data management. Enterprises that leverage GenAI create even more advantages by operationalizing insights and recommendations.

DEPLOYING SCALABLE SOLUTIONS

FUTURE-PROOFING INFRASTRUCTURE:

As data volumes grow, organizations need scalable solutions that adapt to changing demands. Modern data platforms like Databricks offer serverless elastic scalability, lowering costs by eliminating unused compute and storage assets.

SUPPORTING DIVERSE DATA TYPES:

Most (80% to 90%) of data is unstructured[3]. Scalable next-generation architectures ingest and transform structured and unstructured data, accommodating diverse data sources (such as IoT devices and social media) and enabling richer analytics.

[3] Tam Harbert, "Tapping the Power of Unstructured Data," article, MIT Management Sloan School, February 1, 2021, https://mitsloan.mit.edu/ideas-made-to-matter/tapping-power-unstructured-data

[4] Link: https://zeenea.com/data-mesh/

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3 ENTERPRISE DATA CHALLENGES ARE GROWING

⚠️ **GROWING MAINTENANCE COSTS**

Legacy systems divert resources from innovation due to outdated technologies and increased downtime.

⚠️ **HINDERING INNOVATION**

Legacy systems create data silos and inefficiencies, restricting new technology adoption and customer experience improvements.

⚠️ **CREATING SCALABILITY LIMITATIONS**

Inflexibility and prohibitive costs in scaling hamper enterprise growth and the ability to adapt to market changes.

⚠️ **INCREASING COMPLIANCE AND SECURITY RISKS**

Outdated systems pose security vulnerabilities and make regulatory compliance more challenging.

By 2025, companies will spend 40% of their IT budgets on maintaining technical debt. While technical debt goes beyond legacy applications, application costs can make up to 80% of the entire IT budget, and retiring legacy applications can lead to substantial cost savings.[5]

[5] Link: https://www.recordpoint.com/blog/maintaining-legacy-systems-costs

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4 MODERNIZE YOUR DATA WITH TREDENCE AND DATABRICKS

Tredence and Databricks provide a proven approach for enterprises seeking to modernize their data in elastic cloud infrastructure, develop real-time insights based on streaming data, and empower teams with the curated data sets they need to experiment and innovate. Tredence solves last-mile data and AI challenges for global enterprises. We provide a proven modern data strategy approach leveraging frameworks and accelerators that accelerate data-driven transformation for your company. Our Migrate to Modernize approach has unlocked fresh business value for various industry companies like yours.

The Databricks Data Intelligence Platform is the market leading data platform, enabling all your data, analytics, and AI activity to occur in one place while providing world-class performance and data lake economics.

WITH ROBUST SOLUTIONS LIKE DELTA SHARING AND UNITY CATALOG, YOU:

Gain petabyte-scale data handling

Solve data challenges once and for all with a Data Intelligence Platform built for modern business and scalable data processes.

Enable low-cost, infinite scalability

Integrate and use more data to create a robust picture of customers, operations, and organizational performance. Derive insights from large data sets and share them with all key stakeholders. Deploy analytics across business units and teams.

Create real-time insights

Leverage real-time data streaming, analytics, and reporting processes to generate up-to-date insights on current and predicted business performance. Empower your teams with self-service capabilities and the holistic and granular views they need to prioritize and drive process improvements.

Increase agility and responsiveness to market changes

Develop rapid intelligence on market trends, customer behaviors, and emerging risks impacting your business. Use these insights to identify and monetize opportunities and continually mitigate risks, driving greater ROI on investments.

UNLOCKING POTENTIAL: TREDENCE'S MIGRATE TO MODERNIZE VALUE PROPOSITION
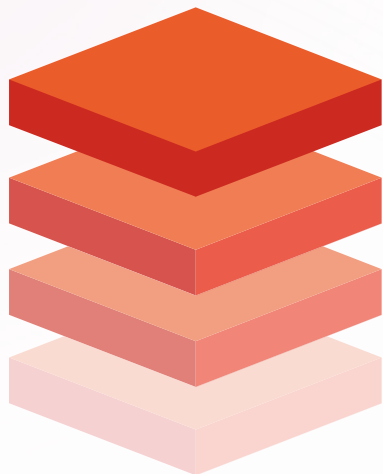
ACCELERATED MIGRATION
Tredence accelerators and frameworks

40% Improvement in migration time

20% Improvement in developer productivity

HIGHER ROI
Cost savings & improved profitability

20-30% Increase in operational efficiency

40% Reduction in cost of quality

TAILORED ROADMAP
Customized migration plans

40% System performance gains

40% Data accuracy improvement

PROACTIVE INNOVATION
Integrate cutting-edge technologies

40% Revenue growth within first year

40% Increase in customer satisfaction score

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TREDENCE'S SEVEN-STEP METHODOLOGY

Tredence's comprehensive seven-step methodology enables migration and modernization of data infrastructure, leading to actionable insights and improved business outcomes.

WITH TREDENCE, YOU WILL WORK THROUGH THE FOLLOWING APPROACH:

STEP 01
ASSESSMENT & PLANNING

- Evaluate current systems and analytic capabilities
- Align stakeholder & migration goals
- Identify opportunities for modernization through data

STEP 02
DESIGN & ARCHITECTURE

- Develop cloud native architecture
- Establish a robust data strategy for effective data flow
- Incorporate advanced analytics for deeper insights

STEP 03
AGILE IMPLEMENTATION

- Execute phased migrations focusing on Business continuity
- Apply DevOps practices CI/CD
- Conduct rigorous testing to ensure data integrity

STEP 04
OPTIMIZE FOR COST AND PERFORMANCE

- Cost Management – Analyze & forecast cost
- Performance Tuning – Workloads for efficiency
- Integrate security measures, Compliance requirements

STEP 05
VALUE ENHANCEMENT

- Innovation Enablement Leverage Advanced analytics (AI/ML)
- Leverage cloud capabilities like AutoML, GPU's
- Enable Self-Service & modern applications like Gen AI

STEP 06
MONETIZATION OF DATA

- Value Extraction identify & incorporate new revenue streams
- Partnership Opportunities – share data, joint ventures
- Personalization & Targeting – improve customer engagement

STEP 07
CHANGE MANAGEMENT

- Provide training on analytic tools and methodologies
- Foster user engagement & analytic adoption
- Feedback & Continuous improvement

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5 WHY MODERN BUSINESS RELIES ON THE DATABRICKS DATA INTELLIGENCE PLATFORM

When you deploy the Databricks Data Intelligence Platform, you gain advanced capabilities, including:
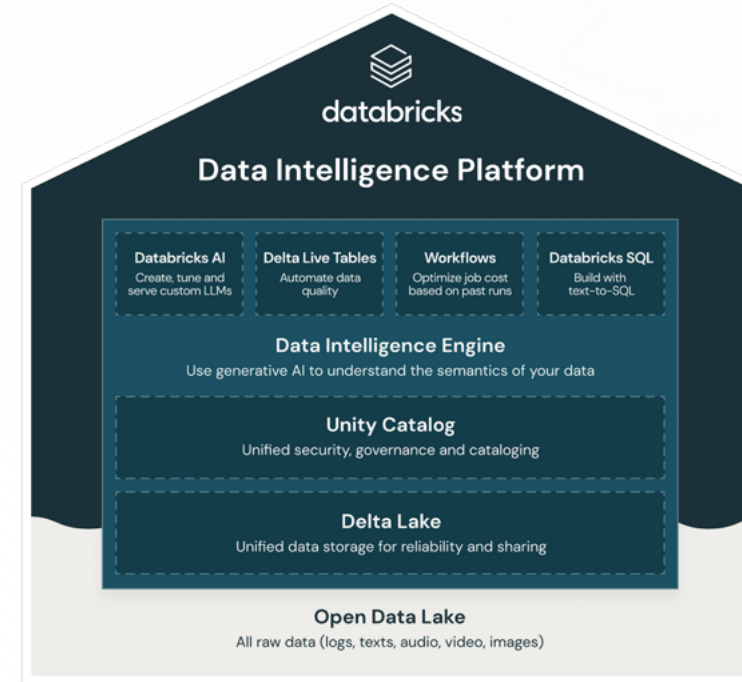
DATA WAREHOUSING ON THE LAKEHOUSE

Databricks SQL (DB SQL) is a serverless data warehouse on the Databricks Lakehouse Platform that runs all your SQL and BI applications at scale with up to 12x better price/performance, a unified governance model, open formats and APIs, and your tools of choice—with no vendor lock-in.

LIGHTNING-FAST ANALYTICS FOR ALL QUERIES

The Databricks Data Intelligence Platform is built from the ground up for the best performance. Gain optionality by creating predictive analytics from concurrent streams of gigabytes of data when insight is key or reducing costs by analyzing terabytes of data instead.

ACCESS INSTANT, ELASTIC SQL COMPUTE DECOUPLED FROM STORAGE

Lower costs and increase productivity with instant, elastic SQL serverless compute decoupled from storage. Databricks automatically determines instance types and configurations for the best price/performance and scale for high concurrency needs.

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Data Intelligence Platform

Databricks AI	Delta Live Tables	Workflows	Databricks SQL
Create, tune and serve custom LLMs	Automate data quality	Optimize job cost based on past runs	Build with text-to-SQL

Data Intelligence Engine
Use generative AI to understand the semantics of your data

Unity Catalog
Unified security, governance and cataloging

Delta Lake
Unified data storage for reliability and sharing

Open Data Lake
All raw data (logs, texts, audio, video, images)

✓ **Built on the robust open lakehouse foundation,** Databricks empowers seamless execution of all your data and AI initiatives.

✓ **Mosaic AI delivers comprehensive solutions** for both generative and classical AI, enabling end-to-end AI workflows.

✓ **Advanced notebooks provide a rich suite** of data science capabilities for in-depth analysis and modeling.

✓ **Databricks SQL offers the highest-performance** cloud-based data warehouse for efficient querying and analytics.

✓ **The AI/BI integration with Databricks SQL facilitates** seamless extension of business intelligence across the organization.

✓ **LakeFlow ensures reliable ingestion and transformation** of data to support diverse workloads.

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ONE SOURCE OF TRUTH FOR ALL YOUR DATA

Databricks SQL stores and processes data using the open-source format Delta Lake, based on Parquet. Delta Lake adds quality, reliability, and performance to your existing data lakes. It provides one common data management framework for batch and streaming, extract-transform-load (ETL), analytics, and machine learning.

CENTRALIZED GOVERNANCE

Confidently manage and secure data access using standard SQL. Seamless integration with Unity Catalog enables data lineage, role-based security policies, table or column level tags, secure live data sharing, and central auditing capabilities on your lakehouse.

INGEST, TRANSFORM, AND QUERY WITH ANY TOOL

Self-serve data ingestion from cloud storage, local files, or business-critical applications. Query the freshest data in SQL and build apps and dashboards with any tool powered by the Lakehouse. Use a familiar toolkit to discover and transform all your data in place using standard SQL.

GAIN A FIRST-CLASS SQL DEVELOPMENT EXPERIENCE

Query data lake data using familiar ANSI SQL. Collaboratively find and share new insights faster with the built-in SQL query editor, alerts, visualizations, and interactive dashboards.

GET THE BEST OF THE LAKE IN THE WAREHOUSE

Accelerate time from raw to actionable data at scale—in batch or streaming, democratize machine learning (ML), and go from business intelligence (BI) to ML effortlessly to uncover new insights.

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6 GAIN GREATER BUSINESS VALUE FROM NEW DATABRICKS FEATURES

ENHANCED DATA PRIVACY

Delta Share and Unity Catalog deliver clean rooms that ensure secure, compliant analysis of sensitive data without privacy risks. Your teams and partners can analyze data while keeping security and compliance guardrails in place. As a result, you can monetize data in new ways by improving operations or using shared insights to develop new products and services.

SEAMLESS DATA SHARING

Unity Catalog and Delta Sharing enable secure, real-time data sharing with partners, enhancing decision-making. Your teams can build customer data platforms, using first-party data to drive product and service innovation and deepen customer relationships.

UNIFIED DATA MANAGEMENT

Unity Catalog provides centralized governance, access control, and collaboration across diverse data environments. Your company can provide role-based data access, enabling users to consume the data they need to do their jobs.

FUSION QUERYING

Lakehouse Federation enables seamless access to data from multiple cloud sources for unified, real-time insights. You can make decisions based on more of your data, using AI-powered scenarios and outcomes to optimize every outcome.

CONVERSATIONAL EXPERIENCE

Data Rooms and Genie allow interactive data exploration through natural language queries, fostering collaboration. Your teams and partners can do more with data, innovating faster.

7 **INNOVATING WITH IMPACT** HOW TREDENCE AND DATABRICKS TRANSFORM ENTERPRISE

Tredence and Databricks partner with leading enterprises to develop modern data strategies and build the foundational capabilities they need to succeed with analytics and AI. See what your peers have achieved by modernizing their data with us.

CASE STUDY 01

LEADING CONVENIENCE RETAILER EVOLVES DATA STRATEGY TO KEEP PACE WITH GROWTH

TECHNICAL PAIN

This global convenience retailer had daily data-related data challenges due to growth and acquisitions. As a result, the company had petabytes of data it wasn't using, and leaders had to wait 30 hours for reports to be produced.

SOLUTION

Tredence partnered with the retailer to develop a comprehensive, updated data strategy. We migrated the company's data, implemented a retail data model, and deployed ATOM. AI data science accelerators. The data platform leveraged Microsoft Azure, the Databricks Data Intelligence Platform, and PowerBI to enable real-time data streaming, democratize data access, and provide teams with tailored predictive analytics.

IMPACT

14%	**$45M+**	**$98M**	**$98M**	**$220M**
Improved marketing ROI by boosting customer engagement and repeat visits with personalization	**Cost savings** from improving demand forecasting by 10+ points and reducing food spoilage	**Cost savings** by optimizing inventory	**Additional merchandise sales** by enabling proactive replenishment of products	**Cost savings** by implementing out-of-stock alerts that avoided lost fuel sales

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LEADING US MEMBERSHIP-BASED RETAILER IMPROVES THE MEMBER EXPERIENCE BY MODERNIZING DATA

TECHNICAL PAIN

The retailer's four different data legacy architectures and lagging data processes reduced visibility into its sales and inventory processes, increasing out-of-stock goods and product waste. In addition, the retailer suffered from data quality issues.

SOLUTION

Tredence leveraged its Migrate to Modernize approach, developing a new technical architecture, unified data model, and enrichment capabilities based on the Databricks Data Intelligence Platform to achieve the retailer's data, efficiency, and cost goals. With a single version of truth and ML algorithms that surface any data issues, the retailer has rebuilt stakeholder trust in its organizational performance data. Teams now use real-time data analytics to improve demand forecasting, stock levels, and marketing personalization. In addition, the retailer has been able to launch a new retail media network (RMN) to offer targeted advertising to brands and vendors.

IMPACT

$200M ARR
In projected annual revenues by offering an RMN

500 new KPIs
Enabled to provide insights across the retail and fuel businesses

85%
Cost savings by optimizing inventory

65%
Additional merchandise sales by enabling proactive replenishment of products

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GLOBAL ONLINE MARKETPLACE AND RESELLER INNOVATES ITS E-COMMERCE CUSTOMER EXPERIENCE

TECHNICAL PAIN

A leading online marketplace experienced rapid business growth, straining data processes. The company needed a modern data architecture that could support rapid experimentation and enhance the user experience by enabling personalization at scale.

SOLUTION

Tredence modernized data on the AWS Cloud and Databricks Data Intelligence Platform, enabling real-time data processing to optimize the company's e-commerce experience. Marketing and e-commerce teams can experiment easily, testing and deploying new personalization strategies.
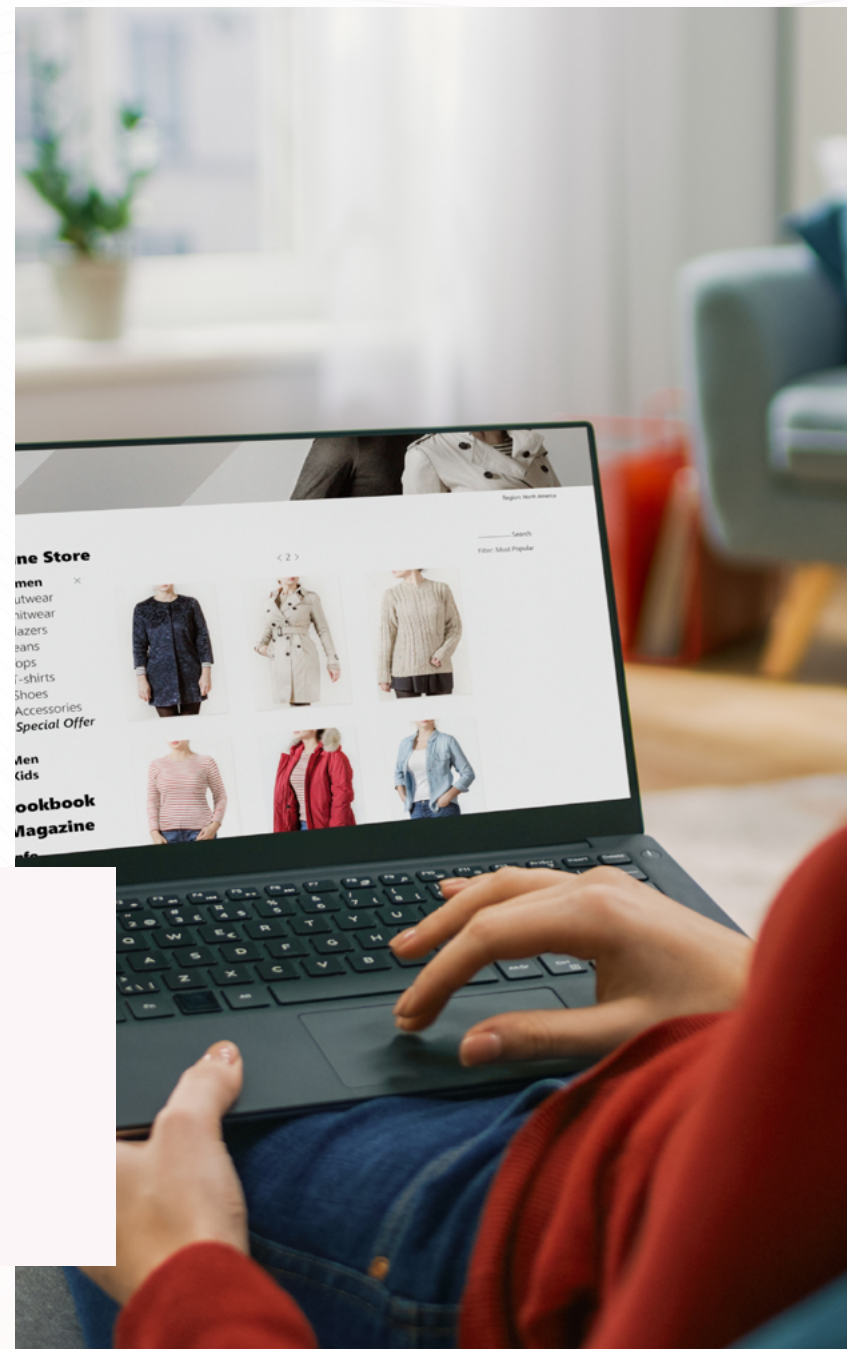
IMPACT

40%
Overall platform cost reductions in Year 1

50%
Improvement in data size, using compression and a standardized data model

25%
Improvement in self-service capabilities

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US SOFT DRINK MANUFACTURER INCREASING BUSINESS AGILITY BY MODERNIZING DATA AND ANALYTICS PROCESSES

TECHNICAL PAIN

The company's sprawling legacy data warehouse environment was susceptible to frequent outages due to heavy loads and scalability constraints. In addition, the company struggled with multipole data challenges, including inefficient pipelines, duplicate provisioning, and slow dashboard processes, all contributing to a high total cost of ownership (TCO).

SOLUTION

The soft drinks manufacturer worked with Tredence to migrate and modernize its data, moving from a relational database management system to a modern, scalable cloud platform. The company created a highly available data environment, optimized ETL and provisioning processes, and enhanced pipeline and dashboard performance.

IMPACT

30%
Reduced platform TCO over three years

99%
Adherence to **pipeline** service level agreements

20%
Improvement in dashboard performance

Highly available
Data and analytics **environment** with minimal downtime

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US TELECOMMUNICATIONS COMPANY DEVELOPING MODERN DATA PROCESSES TO IMPROVE STRATEGIC DECISION-MAKING

TECHNICAL PAIN

A leading US telecom sought to develop advanced analytics and reporting to increase its market competitiveness and streamline operations. However, the company's legacy EDW lacked the flexibility and scalability to handle growing workloads and speed analytics processing and was costly to maintain.

SOLUTION

Using its Migrate to Modernize approach, Tredence migrated a large-scale enterprise data warehouse to the Databricks Data Intelligence Platform and Azure Cloud to reduce costs, simplify the overall architecture, and support new workload patterns for modern analytics and machine learning workloads at scale. Business functions like marketing, customer service, and product development now have the insights they need to make better decisions.

IMPACT

$1M
In expected annual platform savings

50%
Reduction in support personnel after 18 months

80%
Improvement in dataset provisioning timeframes using the new DataOps framework

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BUILD MODERN DATA AND ANALYTICS CAPABILITIES WITH TREDENCE AND DATABRICKS

Accelerate your business transformation with Tredence and Databricks. Build a modern data strategy and platform to democratize data, empower teams with analytics to make better decisions, and automate processes. Create scalable data processes to support your business growth, driving new revenues by developing high-value offerings and reaping cost savings from optimizing operations.

Learn more about how Tredence's Migrate to Modernize framework and the Databricks Data Intelligence Platform empower you to manage, grow, and optimize your business with precision intelligence.

Schedule a complimentary discovery call to gain insights into how you can improve your data, analytics, and AI capabilities at market pace.

Learn more about <u>Databricks</u> and <u>Tredence</u> capabilities here.