TREDENCE
Beyond Possible

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Tredence and Databricks: A Data & AI Collective Driving Last-mile Impact

Modern Architects of Data Modernization and AI Innovation

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About Tredence

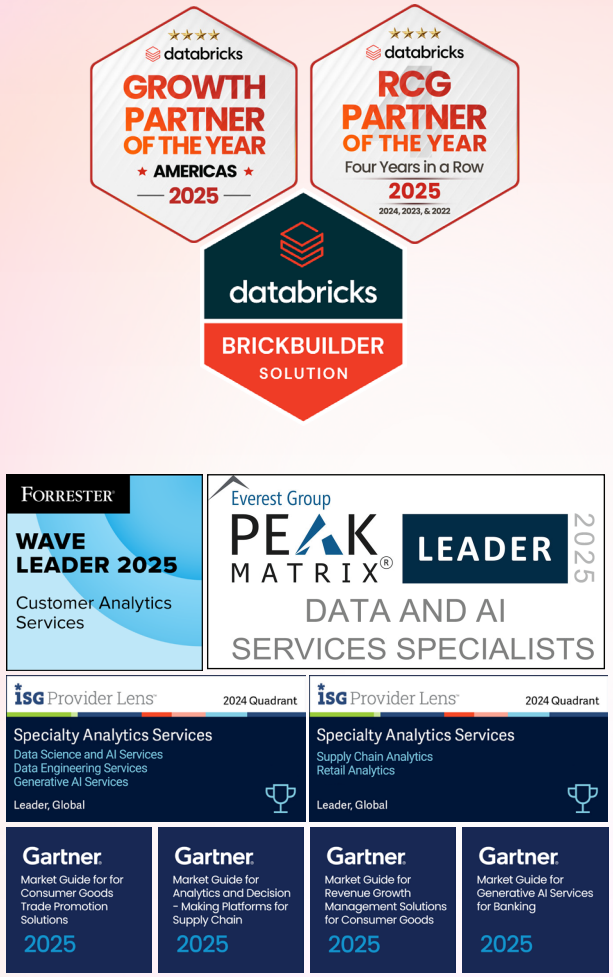
Tredence at a Glance

- **Founded:** 2013 | HQ: San Jose | 3000+ Employees | 12 Offices | 5 Countries
- **Founders:** Shub Bhowmick (CEO), Shashank Dubey (CRO), Sumit Mehra (CTO)
- **Industries:** Retail, CPG, Health and Life Sciences, Manufacturing, Banking & Financial Services, Telecom, Media & Technology, Travel & Hospitality
- **Strategic AI partner** to 50+ Fortune 500 companies across multiple verticals

Why Tredence?

- **Deep domain expertise:** Steeped in industry and domain processes, our teams deliver data and AI solutions that deliver outsized business impact.
- **Speeding time to value with AI accelerators:** Offering 150+ ready-to-deploy accelerators that clients can adopt as their own, acclerating time to value by 50%.
- **Deep investment in innovation:** Investing 10% of our revenue in developing advanced AI and generative AI (GenAI) capabilities, so that we can help our clients scale new solutions across their businesses.
- **Last-mile AI approach:** Combining expertise, innovation, and partnerships to tackle data and AI challenges—proven by a 94% NPS across 1,000+ projects.

Industry Recognitions



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Tredence x Databricks:
Better Together

Our Vision

Tredence recognizes Databricks as our most valuable strategic partner, delivering a significant portion of our partner-associated revenue both today and in the foreseeable future.

With aggressive growth goals ahead, Tredence firmly believes that neither organization can achieve market-scale dominance without the other.

With this vision, we are proud to unveil “Tredence x Databricks: Better Together,” a strategic initiative framed by a series of interwoven joint industry solutions, acceleration in capability building, marketing and go-to-market motions designed to drive market leadership, growth and business value to our customers.

Together, we’re shaping the AI-driven future, where innovation and insights push enterprises beyond what’spossible so that they can grow and stay ahead of the curve. This collaboration is already driving measurable success across industries, as demonstrated by:

140+
Use Cases

75+
Joint Customers

20+
Industry Thought Leadership Assets

10+
Brickbuilder Solutions

600+
Individual DBX Tech-Certified Resources

20+
Databricks Champions



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Brickbuilder and Data + AI Solutions

Retail and Consumer Goods

- Retail.ATOM.AI
- On-shelf Availability (OSA)
- Supply Chain Control Tower (SCCT)
- Test and Learn Platform (TALP)
- Customer Cosmos

Healthcare and Life Sciences

- Smart Manufacturing Command Center
- Value Based Care

Manufacturing

- Manufacturing.Atom.AI
- Digital Twins

Telecom, Media and Entertainment

- Telco.ATOM.AI

AI & Data Platforms

- ATOM.AI
- Sancus Data Quality Accelerator
- ML Works

Migrations

- Ecosystem of Migration Accelerators
- UnityGo!

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BRICKBUILDER SOLUTION

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How Tredence and Databricks Solve Enterprise Challenges

Challenges enterprises face today include:

- **Modernizing data & AI platforms:** Building scalable cloud platforms to integrate multimodal data, support AI/GenAI models, and ensure compliance with global regulations.
- **Convoluted data & AI Ecosystem:** Managing complex, fragmented data pipelines can slow down insights. Adopting data fabric architectures helps simplify integration but remains challenging to scale.
- **Rationalizing technology infrastructures:** Consolidating and modernizing legacy systems that hinder innovation and business growth while unlocking next-gen capabilities.
- **Transforming the business:** Using AI/ML to enable cross-functional collaboration, strengthen decision-making, and automate processes to create a competitive advantage.
- **Creating scalable AI/ML processes:** Leveraging MLOps/LLMOps capabilities to move models from proof of concept to production and monitor and manage them at scale.

Tredence and Databricks offer:

- **Consulting and technology services:** Helping enterprises modernize their data platforms and build AI/ML capabilities to thrive in today's competitive market.
- **Brickbuilder solutions:** Providing horizontal and industry-specific, pre-built data models and analytics capabilities built on the Databricks Data Intelligence Platform.
- **Data & AI accelerators:** Streamlining data migration, enhancing data quality, and accelerating data transformation across both horizontal and vertical use cases with Gen/AI-powered solutions and utilities.
- **Industry solutions:** Tailored vertical-specific KPIs, use cases, prebuilt solutions, data models, and curated AI/ML models designed to address and solve unique industry challenges.
- **Advancing decision intelligence with agentic AI**Building AI-native data foundations, using autonomous agents to optimize decisions and operations in real-time, implementing GenAI-powered decision intelligence, and ensuring responsible and scalable AI.

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Transforming Industries with AI & Data

We've delivered 140+ AI-powered use cases—Here's a curated selection of transformative success stories that showcase real-world impact and business growth.

EXPLORE THE POSSIBILITIES!

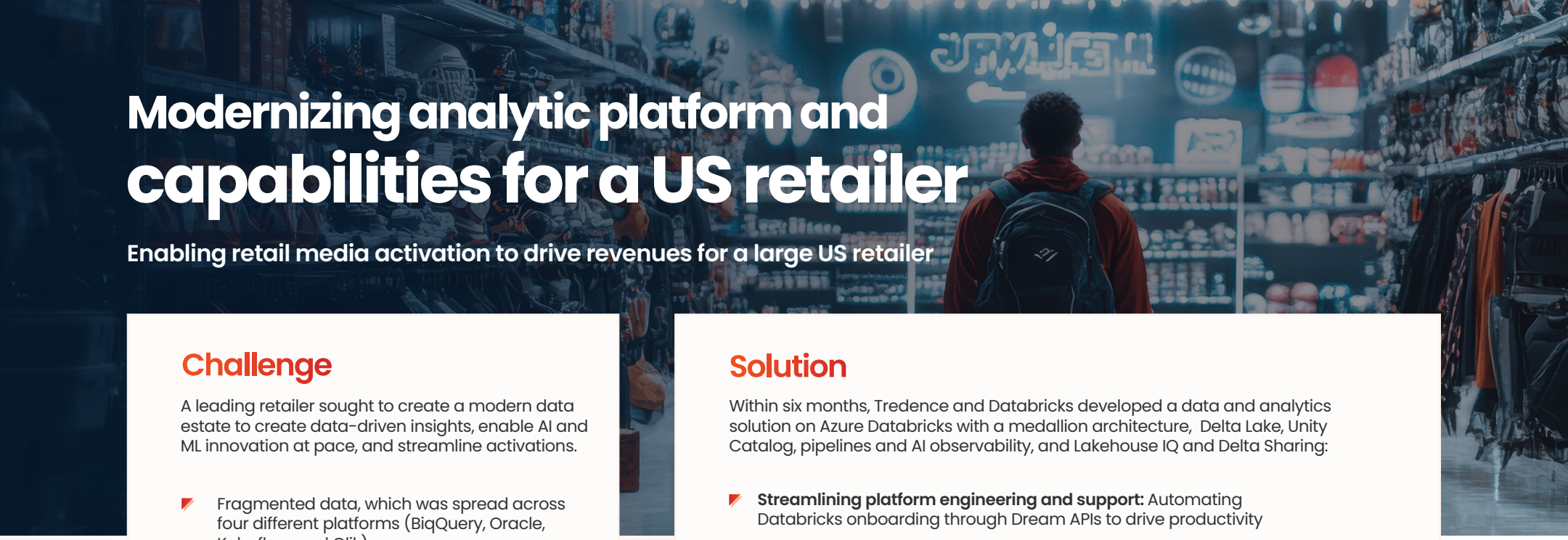
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Better Together





Modernizing analytic platform and capabilities for a US retailer

Enabling retail media activation to drive revenues for a large US retailer

Challenge

A leading retailer sought to create a modern data estate to create data-driven insights, enable AI and ML innovation at pace, and streamline activations.

- Fragmented data, which was spread across four different platforms (BiqQuery, Oracle, Kubeflow, and Qlik)
- An on-premises BI platform that was at capacity
- Limited ability to develop analytics to guide business decision-making

Solution

Within six months, Tredence and Databricks developed a data and analytics solution on Azure Databricks with a medallion architecture, Delta Lake, Unity Catalog, pipelines and AI observability, and Lakehouse IQ and Delta Sharing:

- **Streamlining platform engineering and support:** Automating Databricks onboarding through Dream APIs to drive productivity
- **Migrating to the Databricks Lakehouse:** Enabling SCIP in flight, DDQP, and BQ thoroughly scoped to enable decommissioning of Oracle and IBM DataStage. Qlik reports are rationalized with a clear path to migrate to Power BI, improving the overall BI experience
- **Modernizing athlete data:** Enabling personalization by refactoring more than 127 objects in Databricks
- **Activating and measuring direct media networks:** Measuring off-site campaigns precisely using clean rooms
- **Migrating Kubeflow ML pipelines:** Moving them to Databricks for streamlined model tracking

Business Impact

$58M in new revenues

Generated from Roku, offsite campaigns, and overall offsite channels, with these revenues predicted to grow 20%.

Reports rationalized

Leveraging our T-Discover accelerator to recommend eliminating 60 reports and merging 40 to drive analytics efficiency

Closing a 54% gap

Between the enterprise model and industry standard KPIs, driving customer conversion and basket size

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Evolving customer analytics maturity for a discount grocery retailer

Empowering the in-house team to support business needs and growth

Challenge

The grocery retailer sought to rapidly enhance customer analytics maturity to increase flexibility, transparency, and speed, transitioning from vendor to in-house capabilities.

- **Vendor dependence:** The company relied on a third-party platform for analytics and outsourced customer identity resolution (IDR), limiting its ability to innovate and grow
- **Multiple data sources:** Needed to be integrated into a single platform to create a unified view of KPIs and performance metrics

Solution

Tredence and Databricks transitioned data and analytics capabilities to a modern cloud architecture on Azure Databricks, using the Databricks Data Intelligence Platform and Tredence accelerators:

- **Building an integrated data model:** Integrating data sources and power the creation of insights
- **Standardizing and enriching customer KPIs:** Using a medallion-based data architecture to continuously enhance data quality and create a holistic, reusable Customer 360 database for advanced analytics, BI, and marketing
- **Accelerating the delivery of the gold layer:** Leveraging our prebuilt Customer 360 accelerator, with over 350+ curated customer attributes to speed time-to-value and ensure scalability across use cases
- **Building a white-box IDR solution:** Migrating analytics workflows in-house and building IDR capabilities to reduce vendor reliance
- **Implementing governance:** Establishing a secure, role-based data governance framework and implementing a robust data quality engine

Business Impact

30–50% cost savings
By reducing platform licensing fees

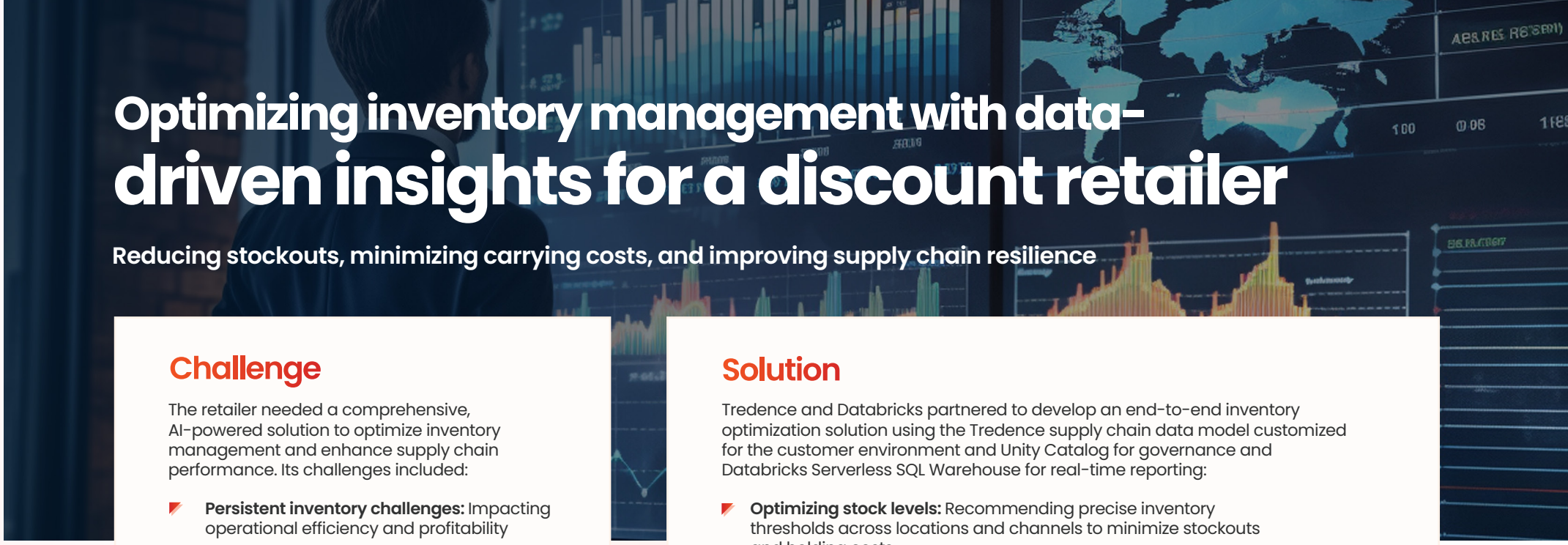
50–70% reduction in onboarding time
Using a scalable automated ingestion process to integrate new data sources

90%+
Data accuracy & integrity ensured across pipelines

100%
PII encryption and role-based access compliance

3–5X faster time-to-insight
For customer and marketing analytics use cases

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Optimizing inventory management with data-driven insights for a discount retailer

Reducing stockouts, minimizing carrying costs, and improving supply chain resilience

Challenge

The retailer needed a comprehensive, AI-powered solution to optimize inventory management and enhance supply chain performance. Its challenges included:

- **Persistent inventory challenges:** Impacting operational efficiency and profitability
- **Overstocking and high carrying costs:** Excess inventory tied up capital and increases storage expenses
- **Stockouts and lost sales:** Inaccurate forecasting led to supply shortages, negatively impact customer satisfaction
- **Limited real-time visibility:** Creating a lack of insights into inventory metrics that hindered proactive decision-making

Solution

Tredence and Databricks partnered to develop an end-to-end inventory optimization solution using the Tredence supply chain data model customized for the customer environment and Unity Catalog for governance and Databricks Serverless SQL Warehouse for real-time reporting:

- **Optimizing stock levels:** Recommending precise inventory thresholds across locations and channels to minimize stockouts and holding costs
- **Predicting and mitigating disruptions:** Identifying potential supply chain risks and suggesting preventive measures
- **Offering real-time analytics:** Providing actionable insights into key inventory KPIs, enabling data-driven decision-making
- **Automating processes for efficiency:** Streamlining routine tasks such as purchase order generation and reorder point calculations

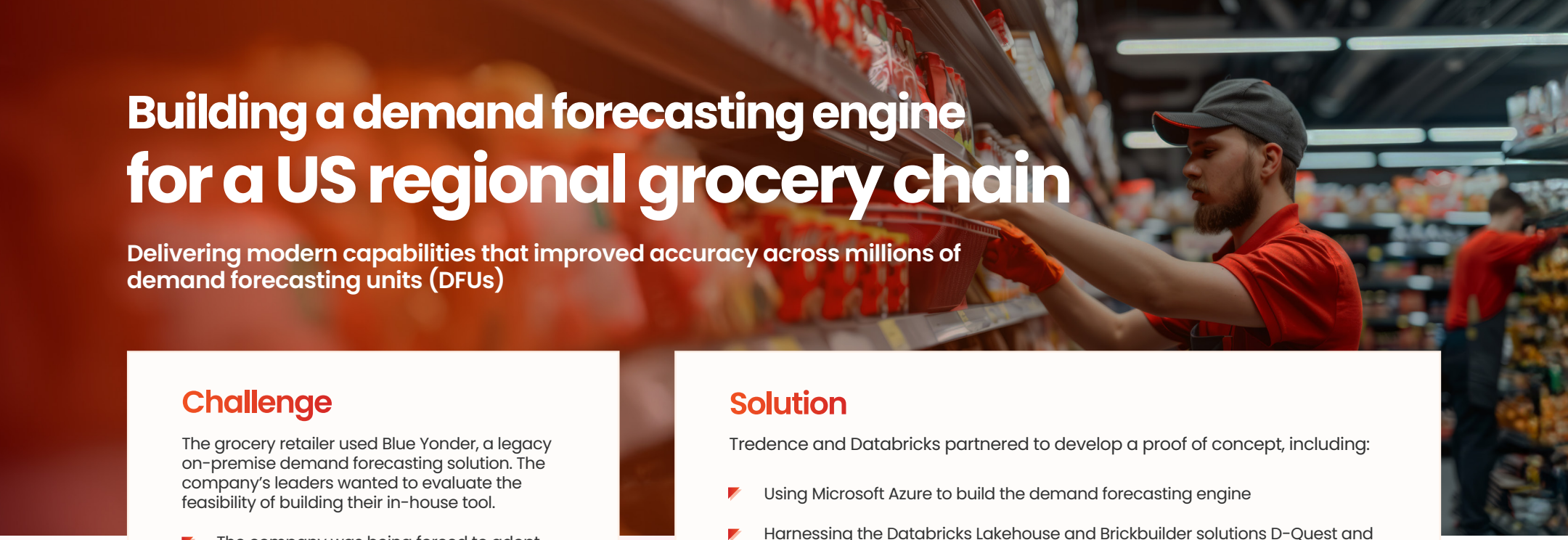
Business Impact

6-8 weeks:
To improve inventory visibility

20%+
Reduction in stockouts:
Ensuring product availability and driving sales

15+
Decrease in carrying costs:
Optimizing working capital

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Building a demand forecasting engine for a US regional grocery chain

Delivering modern capabilities that improved accuracy across millions of demand forecasting units (DFUs)

Challenge

The grocery retailer used Blue Yonder, a legacy on-premise demand forecasting solution. The company's leaders wanted to evaluate the feasibility of building their in-house tool.

- The company was being forced to adopt the vendor's new SaaS tool, which would have required substantial investment
- Leaders wanted to see if a proprietary solution would outperform their current tool

Solution

Tredence and Databricks partnered to develop a proof of concept, including:

- Using Microsoft Azure to build the demand forecasting engine
- Harnessing the Databricks Lakehouse and Brickbuilder solutions D-Quest and Sancus to integrate, harmonize, and improve data and enable data and AI experimentation
- Delivering a suite of models, including multiple linear regression (MLR), Prophet, XG Boost, and grouped Cat Boost models with the latest features to improve accuracy
- Calculating optimal weights using linear optimization to find the best forecast
- Leveraging Tredence MLOps services to maintain models

Business Impact

1.5 M
DFUs tested, with plans to scale models to 45M DFUs

9.3%
Improvement in weighted mean absolute percentage (WMAPE) error (39.1% to 29.8%)

8%
Enhancement in mean absolute percentage error (67.2% to 59.2%)

$220M
Estimated EBITA improvement, or 2% annual gain

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Modernizing data infrastructure to enable value-based care for a leading home health organization

Building a scalable, unified platform to improve patient care and reduce operational costs



Challenge

A leading US home health organization needed to modernize its data infrastructure by migrating its legacy on-premise Data and Analytics capabilities to cloud based Databricks Data Platform. They were facing:

- Scalability limitations in extract-transform-load (ETL) pipelines
- Siloed data systems restricting accessibility and integrated insights
- High operational costs from managing multiple disparate platforms (SQL, AWS, Snowflake)
- Limited AI/ML and GenAI readiness due to its fragmented architecture
- Lack of self-serve analytical capabilities

Solution

Tredence and Databricks partnered to build a Cloud based Data platform on Databricks and implement Sigma based reporting and self-serve analytics

- **Developing a scalable data architecture:** With built-in observability and data quality monitoring
- Implementing **Data Mastering** leveraging **Tredence accelerator** to establish mastering for entities - **Patient, Provider, Payer, Office, Employee, Candidate**
- Implementing Data Marts and developing reports across **Finance and Operational analytics, Quality of Care, Staff performance and Recruitment metrics,**
- **Creating a self-service BI layer:** Enabling actionable insights for multiple user personas

Business Impact

70%
reduction in platform costs

30%
faster time to market for operational KPIs

30%
improvement in operational efficiency

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Streamlining data ingestion and reporting for a global CPG company

Developing an enterprise-grade data architecture to improve data quality, reporting, and decision-making

Challenge

A consumer packagood goods (CPG) company's leaders wanted to create a data platform to develop strategic analytics to grow the business. Key initiatives included determining product-market fit, managing supplier and customer relationships, and engaging with employees.

The company experienced ongoing data challenges, including:

- Data silos, with 8-10 file system types, impeding the firm's ability to create a single version of data truth
- Duplicative data preparation efforts
- Inconsistent data quality, which decreased stakeholder trust in reporting
- An inability to collaborate across functions on key initiatives
- Limited governance over growing data volumes

Solution

Tredence and Databricks developed a cloud-based, unified enterprise-grade data lake platform on Microsoft Azure and the Databricks Lakehouse using the Azure-Databricks Unity Catalog. The solution included:

- Creating a centralized data model and automated data quality processes
- Setting up a data catalog, schema, objects, access, external locations, and notebooks
- Using Brickbuilder solutions T-Ingestor and T-Assurer and the Unity Catalog for data ingestion, encryption, and data quality
- Creating actionable data for reporting and decision-making at bronze, silver, and gold layers of quality

Business Impact

100 KPIs
Enabled with a centralized data model

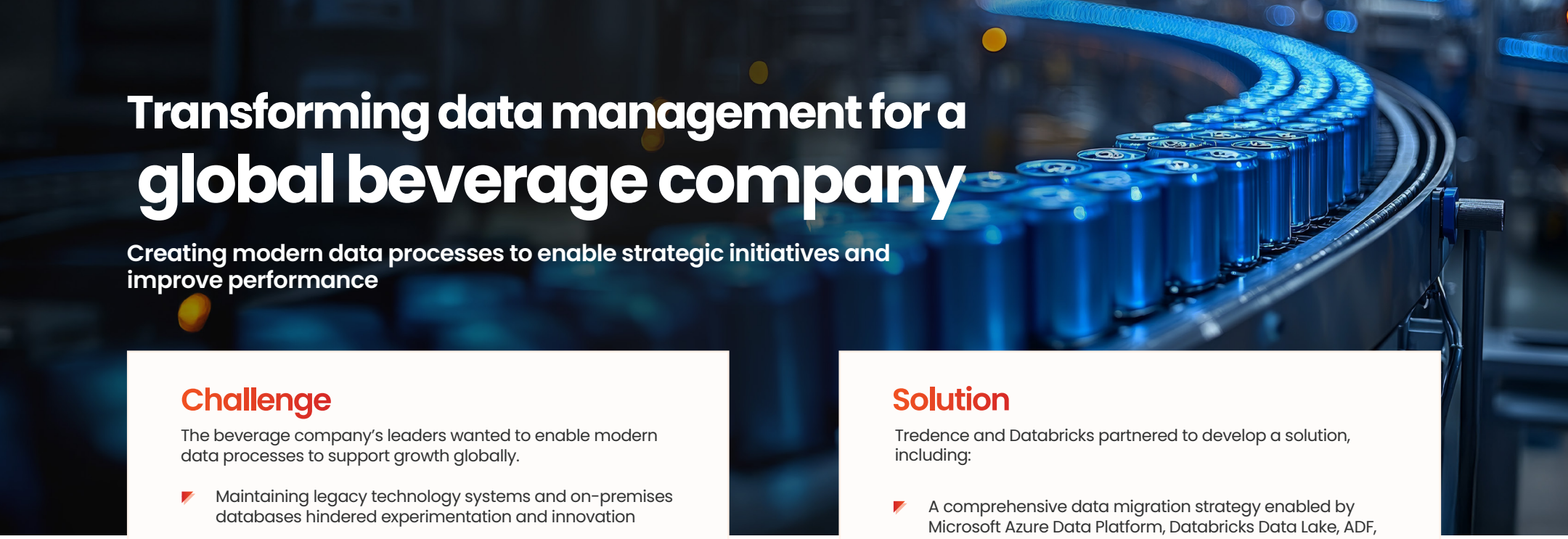
Improving governance
For metadata, access, and security across objects built using the Unity Catalog

50%
Faster time to develop and market use cases

3X
Gain in ingesting data from similar source types

2X
Improvement in building reporting solutions using harmonized data

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Transforming data management for a global beverage company

Creating modern data processes to enable strategic initiatives and improve performance

Challenge

The beverage company's leaders wanted to enable modern data processes to support growth globally.

- Maintaining legacy technology systems and on-premises databases hindered experimentation and innovation
- The aging systems also had high maintenance costs

Solution

Tredence and Databricks partnered to develop a solution, including:

- A comprehensive data migration strategy enabled by Microsoft Azure Data Platform, Databricks Data Lake, ADF, Synapse, and Brickbuilder solutions
- Creating a single version of data truth with a medallion architecture
- Enabling large-scale data processing with Synapse
- Building PowerBI dashboards on the Synapse layer, to serve as a semantic layer for the business

Business Impact

19 Markets
Onboarded to the new solution (17 existing and two new ones)

75%
Reduction in dependency on legacy systems

90%
Faster data quality assurance processes

120+
Tables migrated to Microsoft Azure

100+
Test cases executed as part of data testing

~25+
Synapse views created for PowerBI consumption

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Automating insight creation with AI, ML, and GenAI for a global biotech company

Improving key opinion leader (KOL) engagement, innovation, and regulatory compliance

Challenge

A leading biotechnology sought to extract actionable insights from its vast unstructured data wealth to enhance key opinion leader engagement and streamline decision-making.

The firm struggled with:

- **Fragmented data:** Spread across sources such as PubMed, Scopus, and CRM systems
- **Manual processes:** Used to identify patterns and generate insights about healthcare professional sentiment and relationships
- **Difficulty identifying KOLs:** With challenges mapping KOLs/health care professionals (HCPs) and their networks, the biotech couldn't amplify product knowledge effectively

Solution

Tredence built a robust natural language processing (NLP) platform on the Databricks Delta Lake, using advanced AI/ML methodologies and generative AI models.

- **Automating data preparation:** Ingesting data from key sources via Snowflake and using a Databricks medallion architecture to create a streamlined pipeline
- **Enabling data processing and governance:** Extracting unstructured data using Databricks volumes, establishing data lineage and access using the Databricks Unity Catalog, and flattening datasets into insights using Python-based stopword removal, lemmatization, and embeddings
- **Deploying NLP and AI models:** Deploying JSL and LLM models to extract keywords, summarize text, and enhance searchability
- **Visualizing insights:** Developing interactive dashboards by integrating Plotly Dash with Databricks and presenting real-time insights on HCP/KOL sentiment and engagement metrics to the medical affairs team

Business Impact

280K Physicians

Analyzed to identify KOLs for targeted outreach

500+ hours saved

For medical affairs scientists using NLP to mine 50K+ MSL/HCP conversations and 100K+ scientific publications

Providing strategic decision support

through simple Q&A-based interfaces to get insights from large volumes of unstructured data

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Powering smart manufacturing processes at a biopharma company's plants

Enabling early detection of equipment failures, preventive maintenance, and cross-plant comparisons to reduce performance deviations

Challenge

A biopharma company's leaders wanted to enable smart manufacturing processes with fully automated sites.

The firm experienced operational challenges including:

- Fragmented data streams
- A lack of real-time insights into production
- Inefficient equipment monitoring

Solution

Tredence and Databricks partnered to develop an advanced data platform leveraging the Databricks Delta Lake and orchestrated workflows. The solution included:

- **Data streaming integration capabilities:** Using the Databricks Autoloader and Databricks Raw Layer, with PySpark to generate meaningful insights
- **A business mapping specification document:** Providing transformation rules and parametrized PySpark notebooks
- **Data lineage and automated orchestration processes:** Leveraging the Databricks Unity Catalog
- **Dashboards with actionable data:** Enabling failure analysis, preventive maintenance, and performance comparisons across sites

Business Impact

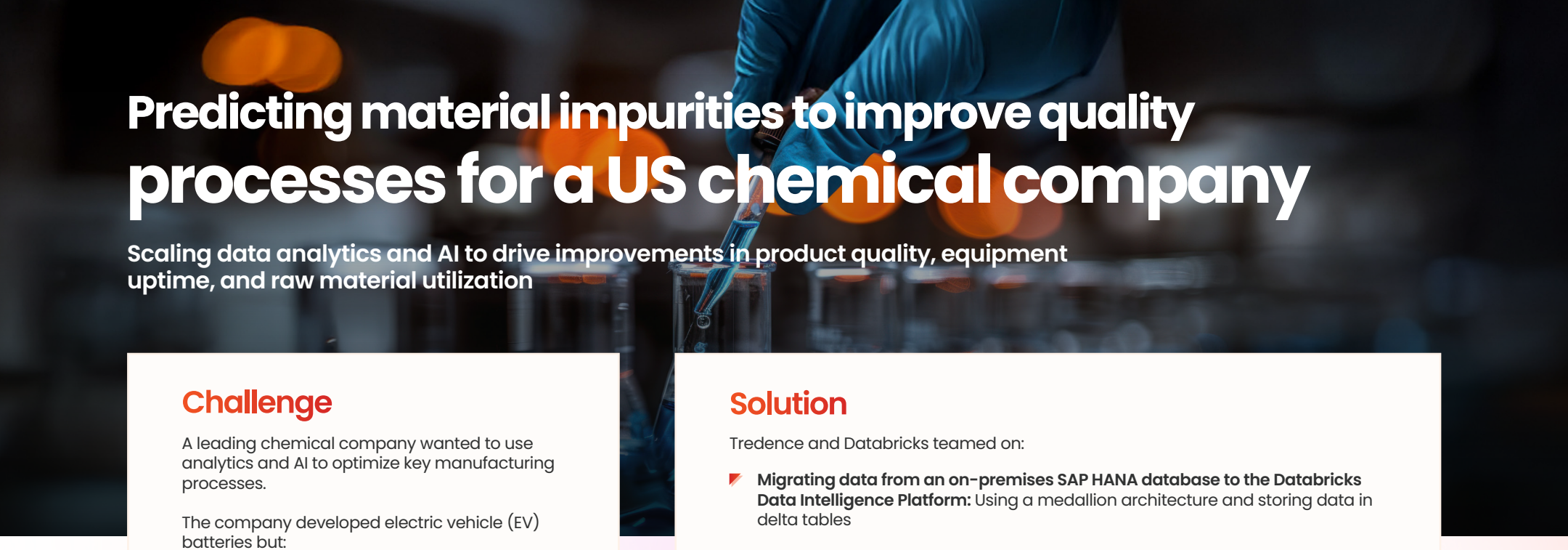
10%
Maintenance cost reduction: Through early detection of equipment failures

10%–15%
increase in batch throughput
By reducing unplanned downtime

Better compliance tracking: Due to batch genealogy solutions

Improved equipment performance: Leveraging cross-site benchmarking to drive process standardization and quality

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Predicting material impurities to improve quality processes for a US chemical company

Scaling data analytics and AI to drive improvements in product quality, equipment uptime, and raw material utilization

Challenge

A leading chemical company wanted to use analytics and AI to optimize key manufacturing processes.

The company developed electric vehicle (EV) batteries but:

- Lacked a way to predict lithium-ion impurities, which impacted battery performance
- Experienced process waste and high product returns

Solution

Tredence and Databricks teamed on:

- **Migrating data from an on-premises SAP HANA database to the Databricks Data Intelligence Platform:** Using a medallion architecture and storing data in delta tables
- **Building a data and analytics platform:** Leveraging Databricks best practices
- **Using Databricks ML cluster configurations and notebooks:** Training, testing, and fine-tuning models
- **Developing an adaptive model:** Reflecting plant constraints and providing actionable recommendations on how to address each variable

Business Impact

Identifying inputs: That impact lithium-ion quality variations and suggesting operating margins for these inputs

12%
Improvement in lithium-ion production yields

5%
Reduction in material wastage

Near-real-time detection:
Of zinc and carbonate content that leads to product issues

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Transforming operations for a leading private equity firm

Automating document summarization of new investment opportunities, speeding response and generating $10M in savings

Challenge

A leading private equity and credit firm's executives sought to speed time to insight on new investment opportunities. However, the firm faced challenges in creating structured reports from unstructured data, including:

- **Synthesizing data at scale:** Collecting and collating high volumes of information on each opportunity
- **Using manual processes:** Requiring multiple checks and validations for data processing and high-end financial analysis, creating errors and increasing costs
- **Harming business responsiveness:** Navigating lengthy due diligence processes created inconsistencies across deals

Solution

Tredence built and deployed an ATOM.AI document summarization solution on the Databricks Data Intelligence Platform.

- **Enabling a secure, scalable, and flexible deployment:** Leveraging Databricks model serving and MLflow to enable seamless updates to target large language models and prompts
- **Providing a containerized infrastructure:** Enhancing scalability and process efficiency
- **Delivering advanced storage solutions:** Providing secure unstructured data storage with NoSQL databases and object storage, enabling rapid access and high availability

Business Impact

90%

Faster deal analysis with automated processes

$10M

In estimated cost savings delivered by using more efficient processes

Enhanced analyst productivity

Empowering teams to focus on higher-level duties.

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Predicting sheet quality and optimizing rolling processes for an aluminum manufacturer

Developing an ML-based solution that predicts the optimal rolling machine settings to produce high-quality aluminum sheets

Challenge

The world's largest aluminum company sought to develop predictive intelligence to reduce quality issues and prevent product waste that harmed the customer experience.

Its challenges included:

- **Variations in raw material properties:** Requiring manual adjustment of rolling parameters, such as speed, torque, and force, to produce high-quality sheets
- **A large number of material and product parameters:** Creating the potential for errors due to manual processes
- **Manual calculations:** Leading to errors and quality issues

Solution

Tredence and Databricks partnered to develop a solution using Azure Databricks:

- **Deploying edge-based IoT services:** Extracting product and machine data from an on-premises historian
- **Developing stream and batch pipelines:** Spanning edge to cloud
- **Building and validating predictive models:** Addressing quality issues
- **Deploying predictive models at the plant edge:** Enabling low-latency insights, which were integrated into the human-machine interface

Business Impact

23% reduction
In production stoppages

17% decrease
In work-in-progress scrap

7% increase
In product quality

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Building an GenAI/LLM-powered chatbot for an integrated resources management leader



Equipping business owners with an intelligent Q&A system that responds with answers or automatically routes queries to SMEs for business updates or reporting

Challenge

A diversified conglomerate sought to build a centralized intelligence platform to empower multiple business units with rapid access to insights and SME expertise. However challenges included:

- **Siloed systems:** Struggling to integrate multiple domains into a single platform for seamless, cross-BU querying
- **Inefficient SME routing:** Lacking a clear mechanism to ensure queries reached the appropriate subject matter experts
- **Delayed insights:** Experiencing long turnaround times to receive responses, impacting agility
- **Dashboard dependency:** Relying heavily on static dashboards, which limited self-service analytics and on-demand decision-making

Solution

Tredence and Databricks partnered to develop an agentic AI-based chatbot solution using Azure OpenAI and Databricks services such as MLflow, Unity Catalog, Notebooks, Workflows, Delta Tables, Model Serving, and a Databricks vector database.

- **Extracting information:** Spanning historical data, business documents, rules, and more
- **Creating a GenAI retrieval augmented generation (RAG)-based chatbot system:** Classifying questions versus statements, predicting domains, recognizing and treating abbreviations, and extracting records from data
- **Blending classical ML and large language models:** Making the system available via multiple channels and using LLMOps to improve model accuracy

Business Impact

60%–80%
Reduction in time to insight

30–50%
Reduction in manual reporting costs

5X
Democratizing data insights with 5x increase in query volumes

Unlocking predictive, prescriptive and diagnostic intelligence

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Improving fire safety efficiency with ML for a large building technologies company

Building a data foundation and advanced analytics to improve visibility and predict fire safety risks



Challenge

A global building technologies leader aimed to enhance emergency response effectiveness and safety in building incident management.

The client's challenges included:

- **Limited alert capabilities:** Providing first responders with only basic alarms, resulting in inefficient rescue operations and increased losses
- **Underutilized data:** Experiencing difficulties leveraging vast building and fire incident data to improve rescue planning, maintain compliance, and enhance stakeholder communication

Solution

Tredence partnered with Microsoft Azure and Databricks to develop a solution using services such as Delta Tables, Azure Data Factory, and Notebooks:

- **Developing stream and batch pipelines:** Integrating data from fire systems and customers
- **Building a comprehensive asset data model:** Leveraging a central data lake to enable user KPI dashboards and advanced analytics use cases
- **Developing real-time dashboards:** Enabling fire system health and status monitoring
- **Building incident severity and false prediction models:** Empowering first responders to make data-driven decisions

Business Impact

90%
Improved visibility into fire risk factors

~15%
Improved efficiency

~12%
Reduced false positives

30%
Accelerated response speed to fire risks

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Enterprise data modernization to enable advanced analytics for US healthcare organization

Unifying data across systems to drive responsible AI and value-based care outcomes

Challenge

One of the largest non-profit Health system in the US sought to modernize its data and analytics capabilities to drive Value based Care, Clinical Operations and Patient Engagement requirements. However, challenges included:

- Operating a complex landscape of traditional data warehouses and healthcare-specific platforms, creating data silos
- Inconsistent access and low trust in analytics outputs
- Scalability limitations with existing infrastructure
- A lack of a common data model for healthcare analytics
- No in-house expertise to lead the data transformation initiative
- Need for governance to support responsible AI and self-serve reporting

Solution

Tredence and Databricks partnered to build a Cloud based Data platform and implement advanced analytics capabilities

- **Developing a future-ready data platform:** Supporting enterprise-wide analytical needs
- **Implementing a unified data model:** Establishing Patient 360 view across his clinical data
- **Enabling analytics and reporting:** Implementing **advanced analytics framework** for different Value-based Care use cases – **Length of Stay, Patient Days, Chronic care management** (track treatment and patient education)
- **Establishing robust data governance frameworks:** Including business glossary and cataloging to support responsible AI adoption

Business Impact

40%
Overall platform cost reduction in the year 1

50%
Improvement in data size through compression and standardized data model

25%
Improvement in self-service

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Enabling proactive supply risk management for a wholesale restaurant food distributor

Leveraging AI/ML to predict and mitigate disruptions before they impact operations

Challenge

The food company sought to create real-time insights and predictive analytics to address challenges including:

- **Unexpected supply chain disruptions:** Severely impacting business continuity
- **Identifying emerging risks:** Creating visibility into supplier performance and market fluctuations
- **Mitigating supply chain disruptions:** Reactive decision-making led to inefficiencies and revenue losses
- **Ensuring operational resilience:** A lack of proactive strategies resulted in stockouts and excess lead times

Solution

Tredence and Databricks partnered to develop an AI/ML-driven predictive supply risk management solution using the Tredence supply chain data model enhanced with customer-specific KPIs:

- **Leveraging Databricks AI/ML:** Using Feature Store and MLflow and integrating with Unity Catalog for centralized governance
- **Providing continuous learning models:** Using AI/ML algorithms to adapt and improve prediction accuracy over time
- **Ensuring seamless integration:** Working across diverse industry landscapes and existing ERP systems
- **Offering actionable risk mitigation strategies:** Providing clear, data-driven recommendations for proactive decision-making
- **Creating near real-time visibility:** Monitoring all inbound shipments and purchase orders, flagging potential delays before they escalate

Business Impact

8-10 weeks:
To achieve value, with a seamless deployment

80% accuracy
With lead times, improving the predictability of supply chain

70%
Accuracy in stockout identification: Enabling proactive replenishment and risk mitigation

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Building a resilient supply chain for a consumer healthcare company

Enhancing agility, efficiency, and risk mitigation with a supply chain command center

Challenge

The healthcare company experienced supply chain issues due to macroeconomic disruptions. Challenges included:

- **A lack of real-time visibility:** Disconnected data silos hindered proactive decision-making
- **Inefficient resource allocation:** Manual processes led to suboptimal inventory and logistics planning
- **Increased risk exposure:** Supplier delays, demand surges, and unexpected disruptions impacted service levels and **profitability**

Solution

Tredence and Databricks partnered to develop an AI-driven supply chain command center using the Tredence healthcare data model and out-of-the-box AI/ML models customized to customer requirements:

- **Enabling unified real-time visibility:** Creating a single source of truth for end-to-end supply chain operations
- **Creating real-time insights:** Using Databricks AI/BI dashboards to optimize supply chain operations
- **Providing prescriptive analytics:** Delivering data-driven recommendations for inventory allocation, route planning, and **fulfillment optimization**
- **Streamlining stakeholder coordination:** Enabling collaboration across suppliers, logistics providers, and internal teams
- **Leveraging predictive risk analytics:** Identifying disruptions before they occur, allowing for proactive mitigation

Business Impact

10–12 weeks
To business impact

10%+
Reduction of working capital requirements: With optimized inventory strategies

2–3%
Cost savings: Improving supply chain efficiency reduced overall operational expenses

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Optimizing service parts forecasting for a multinational engineering company

Enhancing inventory planning with AI-driven demand forecasting to improve availability and cost efficiency

Challenge

The engineering company sought to develop an intelligent forecasting solution to ensure optimal service parts availability while minimizing costs. Challenges included:

- **Complex processes:** Service parts inventory management was hampered by traditional forecasting methods and disconnected systems
- **Stockouts and downtime risks:** Unavailability of critical service parts affected operations and increased maintenance costs
- **Excess inventory and waste:** Overstocking tied up capital and resulted in inefficiencies
- **Lack of predictive insights:** Leading to an inability to anticipate fluctuations and adjust procurement strategies proactively

Solution

Tredence and Databricks partnered to develop an AI-powered service parts forecasting solution using Tredence's out-of-the-box AI/ML models deployed on Databricks, integrated with Unity Catalog, and exposing real-time what-if scenarios:

- **Implementing demand-driven forecasting:** With models incorporating part type, seasonality index, and operational data for improved accuracy
- **Optimizing inventory:** Enabling dynamic stock planning based on criticality, lead times, and demand variability
- **Mitigating risks:** Predicting potential stockouts and recommending preventive actions
- **Enabling scenario planning:** Simulating multiple demand-supply fluctuations to ensure resilience

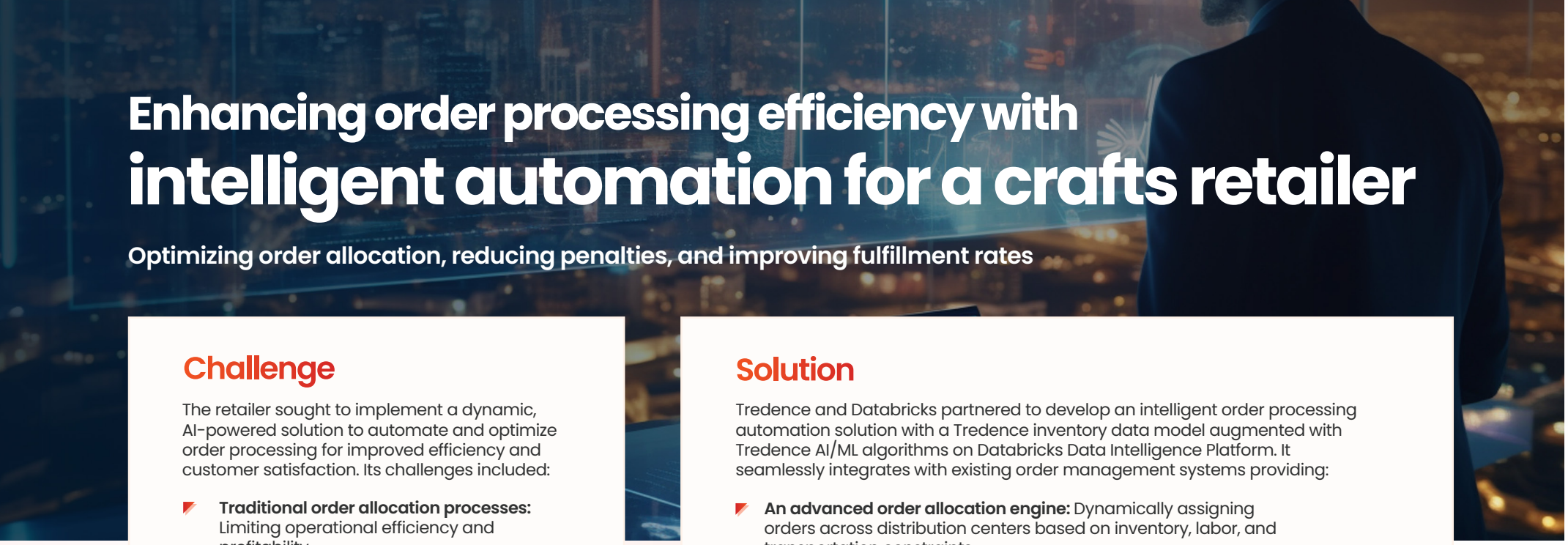
Business Impact

6-8 weeks
To achieve quick operational improvements

20%+
Increase in service parts availability: Reducing downtime

10%
Reduction in inventory holding costs: Improving working capital efficiency

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Enhancing order processing efficiency with intelligent automation for a crafts retailer

Optimizing order allocation, reducing penalties, and improving fulfillment rates

Challenge

The retailer sought to implement a dynamic, AI-powered solution to automate and optimize order processing for improved efficiency and customer satisfaction. Its challenges included:

- **Traditional order allocation processes:** Limiting operational efficiency and profitability
- **Lost sales and stockouts:** Static allocation rules failed to adapt to real-time demand fluctuations
- **Low fulfillment rates:** Inefficient distribution led to delayed or unfulfilled orders
- **High penalties and costs:** Manual redirection of orders increased labor effort and operational expenses

Solution

Tredence and Databricks partnered to develop an intelligent order processing automation solution with a Tredence inventory data model augmented with Tredence AI/ML algorithms on Databricks Data Intelligence Platform. It seamlessly integrates with existing order management systems providing:

- **An advanced order allocation engine:** Dynamically assigning orders across distribution centers based on inventory, labor, and transportation constraints
- **Fulfillment optimization:** Enhancing fill rates while minimizing penalties through data-driven decision-making
- **Operational control and visibility:** Empowering planners with actionable insights and approval workflows for real-time order diversions

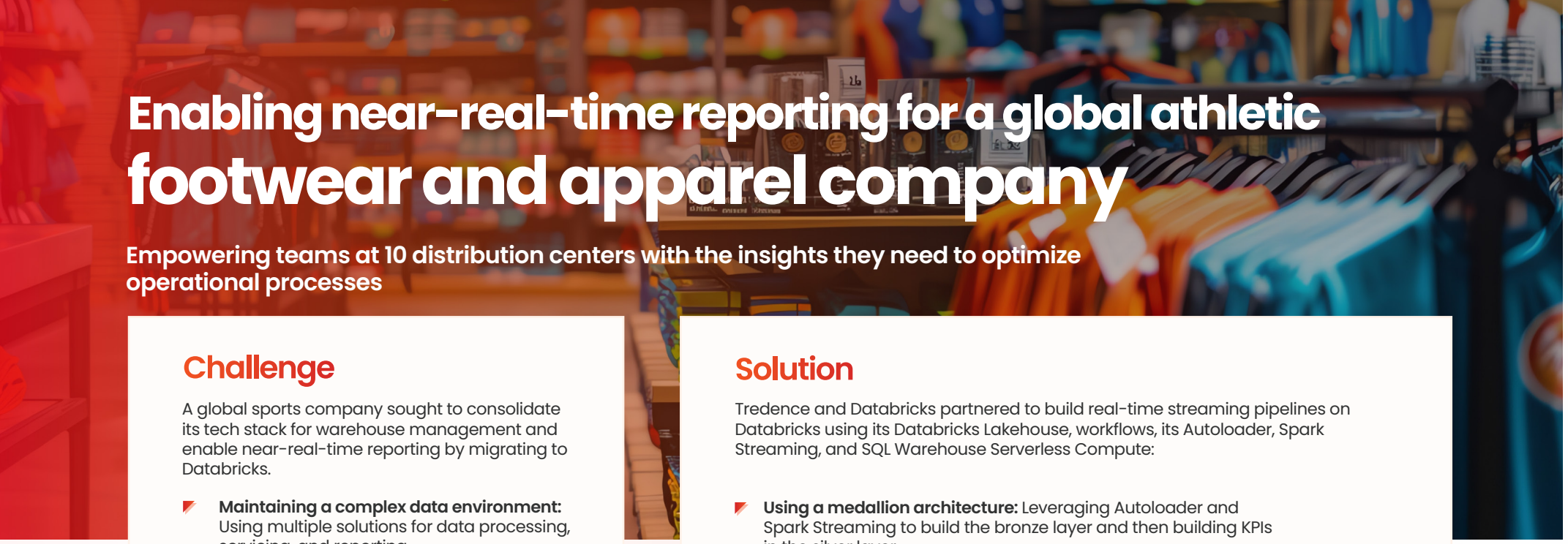
Business Impact

6-8 weeks
To realize business value

20%+
increase in case fill rates: Ensuring higher fulfillment

30%
Reduction in penalties: Optimizing cost efficiency

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Enabling near-real-time reporting for a global athletic footwear and apparel company

Empowering teams at 10 distribution centers with the insights they need to optimize operational processes

Challenge

A global sports company sought to consolidate its tech stack for warehouse management and enable near-real-time reporting by migrating to Databricks.

- **Maintaining a complex data environment:** Using multiple solutions for data processing, servicing, and reporting
- **Reporting lag times:** The company's 10 distribution centers (DCs) had lag times of 10–15 minutes due to the complexity of the tech stack (Airflow, Document DB, Amazon EMR, and Snowflake)

Solution

Tredence and Databricks partnered to build real-time streaming pipelines on Databricks using its Databricks Lakehouse, workflows, its Autoloader, Spark Streaming, and SQL Warehouse Serverless Compute:

- **Using a medallion architecture:** Leveraging Autoloader and Spark Streaming to build the bronze layer and then building KPIs in the silver layer
- **Creating a reporting view:** Streamlining business access to data and analytics
- **Ensuring real-time data processing:** By connecting the reporting solution to Databricks SQL Warehouse Serverless Compute, enabling near-real-time reporting on data processed in the Lakehouse

Business Impact

50–70%

Accelerated data processes: With delivery in less than five minutes

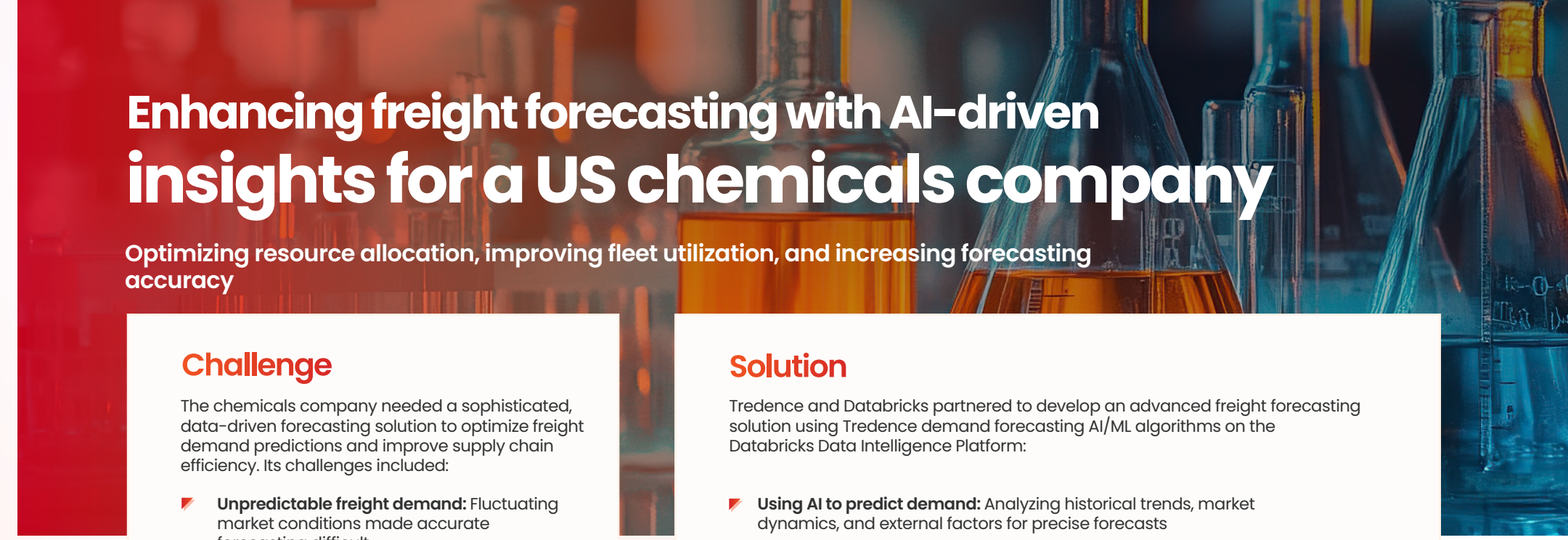
50%

Cost savings: Due to the use of Databricks workflows and a shared job cluster to run multiple datasets for a DC

30%

Improvement in KPI quality with single source of truth of data in Databricks

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Enhancing freight forecasting with AI-driven insights for a US chemicals company

Optimizing resource allocation, improving fleet utilization, and increasing forecasting accuracy

Challenge

The chemicals company needed a sophisticated, data-driven forecasting solution to optimize freight demand predictions and improve supply chain efficiency. Its challenges included:

- **Unpredictable freight demand:** Fluctuating market conditions made accurate forecasting difficult
- **Lack of real-time insights:** Delayed data processing hindered proactive decision-making, harming operational performance and cost efficiency
- **Inefficient resource allocation:** Suboptimal capacity planning led to underutilized fleets and increased costs

Solution

Tredence and Databricks partnered to develop an advanced freight forecasting solution using Tredence demand forecasting AI/ML algorithms on the Databricks Data Intelligence Platform:

- **Using AI to predict demand:** Analyzing historical trends, market dynamics, and external factors for precise forecasts
- **Selecting carriers and optimizing routes:** Providing data-driven recommendations to enhance efficiency
- **Monitoring performance with analytics:** Tracking key metrics like on-time delivery, carrier performance, and budget utilization
- **Simulating scenarios:** Building customized web apps to build for Databricks models to perform scenario-based simulations, assess potential impacts, and improve decision-making
- **Providing seamless integration:** Connecting with ERP and TMS platforms for streamlined workflows and data exchange using Databricks Delta Share

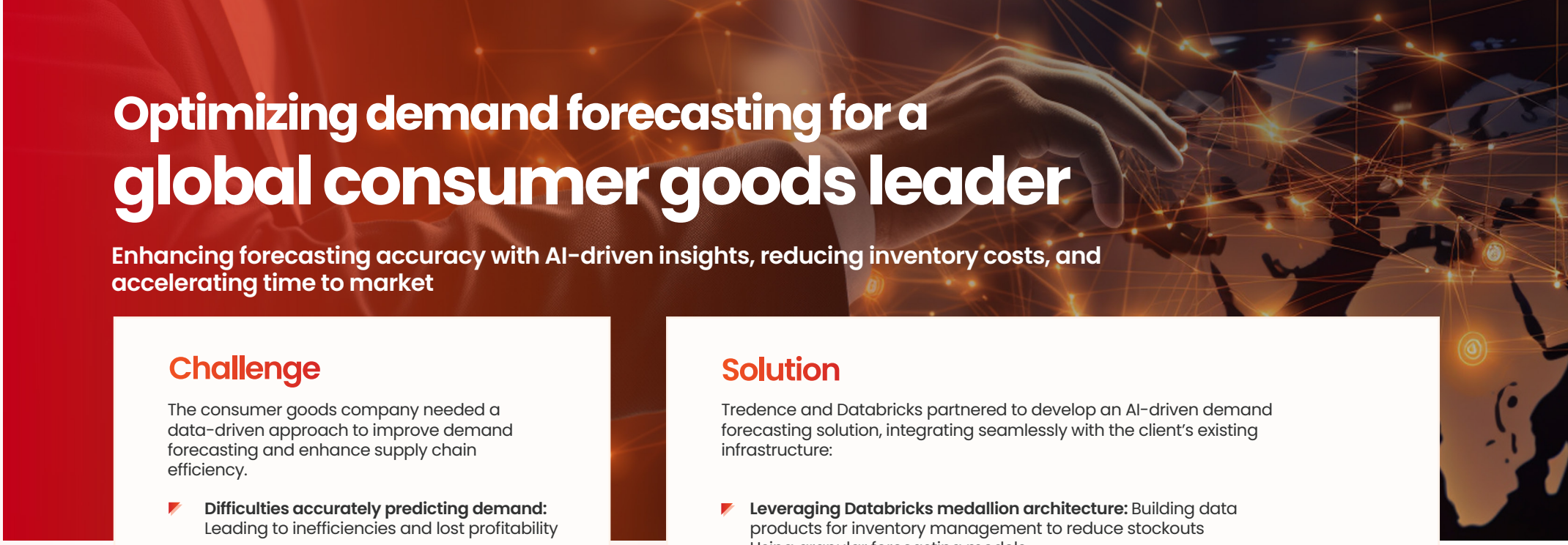
Business Impact

6-8 weeks
To enhance freight forecasting

85%+ Accuracy
Improving day-level freight requirement predictions

5-6% improvement
Increasing fleet utilization, optimizing logistics operations

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Optimizing demand forecasting for a global consumer goods leader

Enhancing forecasting accuracy with AI-driven insights, reducing inventory costs, and accelerating time to market

Challenge

The consumer goods company needed a data-driven approach to improve demand forecasting and enhance supply chain efficiency.

- **Difficulties accurately predicting demand:** Leading to inefficiencies and lost profitability
- **Stock imbalances:** Understocking created missed sales opportunities, while overstocking increased holding costs
- **Limited visibility:** Inconsistent demand patterns made it difficult to anticipate market fluctuations
- **Reactive decision-making:** Slow, manual forecasting processes hindered agility in responding to changes

Solution

Tredence and Databricks partnered to develop an AI-driven demand forecasting solution, integrating seamlessly with the client's existing infrastructure:

- **Leveraging Databricks medallion architecture:** Building data products for inventory management to reduce stockouts Using granular forecasting models
- **Using granular forecasting models:** Leveraging advanced statistical techniques to deliver hyper-accurate demand predictions
- **Automating data ingestion and processing:** Ensuring real-time updates and continuous model improvements
- **Providing interactive dashboards and reports:** Creating visibility into key demand drivers and potential disruptions
- **Enabling scenario planning:** Assessing the impact of market shifts, promotions, and new product launches

Business Impact

6-9 weeks
To improve demand planning

~700 BPS
Improvement
In forecasting accuracy

~10% Reduction
In inventory holding costs,
optimizing working capital

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Modernizing clinical data and enabling Patient 360 views for a pediatric healthcare organization

Building a scalable and interoperable platform for personalized pediatric care

Challenge

A leading pediatric healthcare organization needed to replace Heatlh Catalyst, its third-party reporting system and implement a Databricks based Unified Data and Analytics platform on cloud.

Challenges included:

- Difficulty scaling its data infrastructure
- Siloed systems, limiting a holistic view of patient health
- Delayed clinical data integration, impacting timely decision-making
- Manual, error-prone reporting processes, slowing down insights
- Inflexible tools that hindered the shift to value-based care models

Solution

Tredence and Databricks partnered to develop a modern Healthcare Data and Analytics platform on Databricks leveraging Tredence accelerators:

- **Establishing an enterprise data warehouse:** integrating clinical and claims data from EPIC EHR and establish a Unified Healthcare Data Model
- **Implementing FHIR data model** to enable interoperability downstream
- **Implementing Patient 360** to drive Value Based Care use cases (Clinical Risk, Utilization Risk, Patient risk stratification), ACO reports, and OrderSets Explorer

Business Impact

30%

Cost savings by minimizing reliance on third-party systems

Faster deployment timelines through accelerator-driven implementation with pre-built models

Enhanced clinical data transparency and improved

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Tredence has demonstrated exceptional depth in industrial manufacturing and supply chain transformation. Their ability to combine deep domain expertise with technology expertise on data intelligence platform has consistently delivered measurable business value for our joint customers. Together, we're enabling manufacturers to unlock new efficiencies, improve resiliency, and accelerate their journey toward Industry 4.0.

— **Shiv Trisal**
Head of Industry GTM, Manufacturing, Databricks



Tredence demonstrates deep industry expertise which compliments their deep Databricks' platform understanding. Coupled with Tredence' pre-built accelerators specifically in supply chain, we have gathered significant momentum together and I am confident of significant growth together in the near future.

— **Harris Thayer**
VP & GM, Healthcare & Life Sciences, Databricks



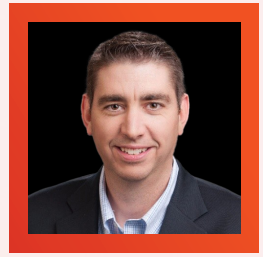
The pairing of Tredence's industry and deep data science expertise with Databricks' Lakehouse data platform provides a compelling proposition for companies looking to invest in data and artificial intelligence.

— **Rob Saker**
VP, Consumer Industries, Databricks



Together with Tredence, we continue to enable the full potential of data for businesses and pave the way for revolutionary advancements in AI.

— **Jason McIntyre**
VP, Consulting & SI Program - Managed Elite Partners, Databricks



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Partner with Tredence and Databricks to:

- **Build a unified, scalable data foundation:** With Databricks Delta Sharing, Unity Catalog, and Brickbuilder accelerators, gain petabyte-scale data handling processes.
- **Innovate with AI:** Use generative AI and advanced analytics to accelerate business value and unlock predictive capabilities.
- **Create real-time insights:** Leverage real-time data streaming, analytics, and reporting to generate fresh insights and empower teams with self-service capabilities and holistic and granular views on business performance.
- **Increase agility:** Respond rapidly to new developments, driving more ROI.
- **Monetize data:** Develop data-driven products and services, personalize marketing, and improve operational efficiency, driving ROI.

EXPLORE DATABRICKS CHAMPION INSIGHTS HERE

SCHEDULE 1-TO-1 MEETINGS WITH OUR AI EXPERTS AND EXPLORE WHAT'S NEXT IN AI WITH TREDENCE



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