



Smart Operations

Business Insights

Syed Fahad Ali Hashmi

Technical Solution Specialist – Data & Analytics

October 05' 2023

Agenda



Intelligent Operations Intro



The Red Zone



The Right Solution for You



Industry Success Cases



Veraqor's Approach



Veraqor's Plan for Your Success

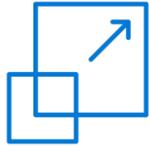
Veraqor Intelligent Operations Domains

Intelligent operations refer to the use of advanced technologies, data analytics, automation, and artificial intelligence (AI) to optimize and streamline various business processes, resulting in increased efficiency, agility, and improved decision-making.

- Data-Driven Decision-Making
- Automation
- Predictive and Prescriptive Analytics
- Process Optimization
- Real-time Monitoring
- Supply Chain Optimization
- Customer Experience Enhancement
- Risk Management
- Employee Productivity
- Agility and Flexibility
- Cost Reduction
- Continuous Improvement

Veraqor's Ultimate Objective

ACCELERATE YOUR FUTURE READINESS



Automating at scale -
end-to-end digitized
processes



Augmenting human talent
with technology – free up people for
more critical thinking and reduce the
margin for human error while
increasing efficiency



Committing to data-
driven decision-making
using better and more
diverse data

Operations' Red Zones



Demand Forecasting and Accuracy

Inaccurate demand forecasting can lead to overstocking or stockouts, affecting operational efficiency and customer satisfaction



Lead Time Reduction

Long lead times can delay production and delivery.



Inventory Management

Excess inventory ties up capital, while insufficient inventory can lead to missed sales opportunities



Transportation and Logistics

Inefficient transportation and logistics processes can lead to higher costs and delayed deliveries.



Managing Optimal Operating Expense

An incomplete understanding of ongoing expenses and deviations from seasonal trends can result in several capital leakages that can build up over time. Rising operational costs across the supply chain impact profitability.



Production Scheduling

Poor production scheduling can result in idle capacity or overburdened resources.

Why Supply Chain Needs to be Intelligent and in the Cloud – A Quick Look at Market Numbers

Cloud leaders have most of their supply chain running in the cloud



21%

Of supply chain executives have deployed cloud-based initiatives across their supply chain

97%

Of these cloud leaders have at least $\frac{3}{4}$ of their supply chains running in the cloud.

Cloud leaders are more innovative and competitive than others

63%

Of cloud leaders v 48% other companies are most likely to say they've overperformed competitors in supply chain innovation

Cloud leaders reported stronger improvements in forecast accuracy, revenue growth, profitability, and supply chain operating costs.



Why Supply Chain Needs to be Intelligent and in the Cloud – A Quick Look at Market Numbers

Cost reduction & efficiency are primary drivers of supply chain migration

The #1 driver executives cited for migrating their supply chain to the cloud is **cost reduction**.

41%

Of all executives said the desire to increase supply chain efficiency was a top-three reason for migrating their supply chains to the cloud.

Forecast accuracy leads the way in benefits from the cloud



26% Increase in demand forecast accuracy

16% Reduction in supply chain operating costs

5% Increase in revenue growth and profitability



Trending now: Intelligent Supply Chain & Demand Forecasting



2029

Projected year by when it will be unacceptable to create waste for a supply chain ¹

Reduction in inventory through use of a demand-driven supply chain ³

30%

70%

Business indicate that AI and Machine Learning will be their top technology choices for forecasting and demand planning ²

Forecasting accuracy achieved by leading retailers ⁴

93%

Create More Resilient Supply Chains



Deliver intelligent supply chain

Overview

Aggregate real-time information throughout the supply chain to improve demand forecasting and increase supplier collaboration.

Potential outcomes

- > Maintain **optimal inventory levels** & improve service
- > Make **better forecasting decisions**
- > **Reduce loss** by tracking assets throughout the logistics journey
- > **Increase agility & responsiveness** across the supply chain
- > **Increase the safety and security** of goods and shipments

Sample target Use Cases

- > Connected supply chain
- > Optimize supply chain
- > Predictive analytics
- > Inventory tracking and management

Customer evidence



Partner





Using AI for Supply Chain Optimization

Optimize your supply chain to anticipate & respond to demand using broad & deep datasets



TRANSFORMATION

Informed by the broadest & deepest array of data, AI can **reliably anticipate the needs** of your distributors wherever they might be, thus influencing a dynamic supply chain



SOLUTION

Apply Machine Learning based inferencing to proactively anticipate distributor demand & to **align & action** from the factory to the retailer



OUTCOMES

Create efficiencies that provide a seamless, fast, and personalized end-to-end journey to meet ever-growing service expectations



Supply Chain Optimization Solution Overview

Optimize your supply chain to anticipate & respond to demand using broad & deep datasets

Data Feed & Repository

Field Data (Spending, Social, Demographic)



Structured



Unstructured

Logistics Data



Product Inventory



Inventory Optimization

Anticipate & Respond



Locate inventory within each distribution hub



Direct inventory to the right geography

Use actual sales data to improve model



Optimization Model

Anticipate Demand

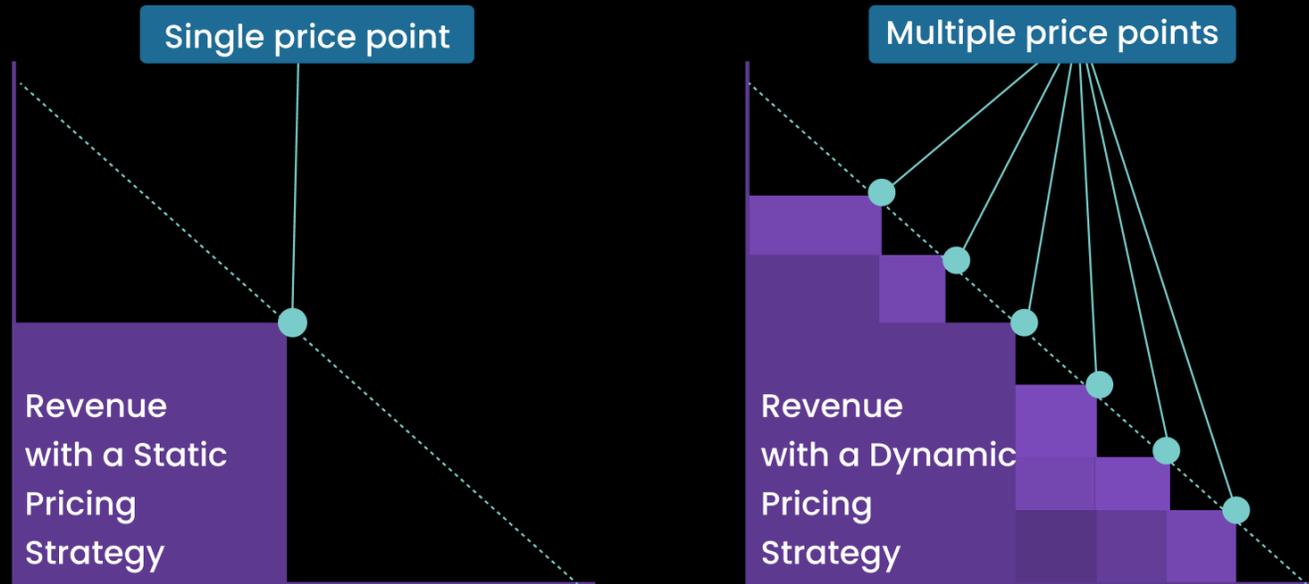


Manufacture Products

Forecasting

Localized Dynamic Pricing

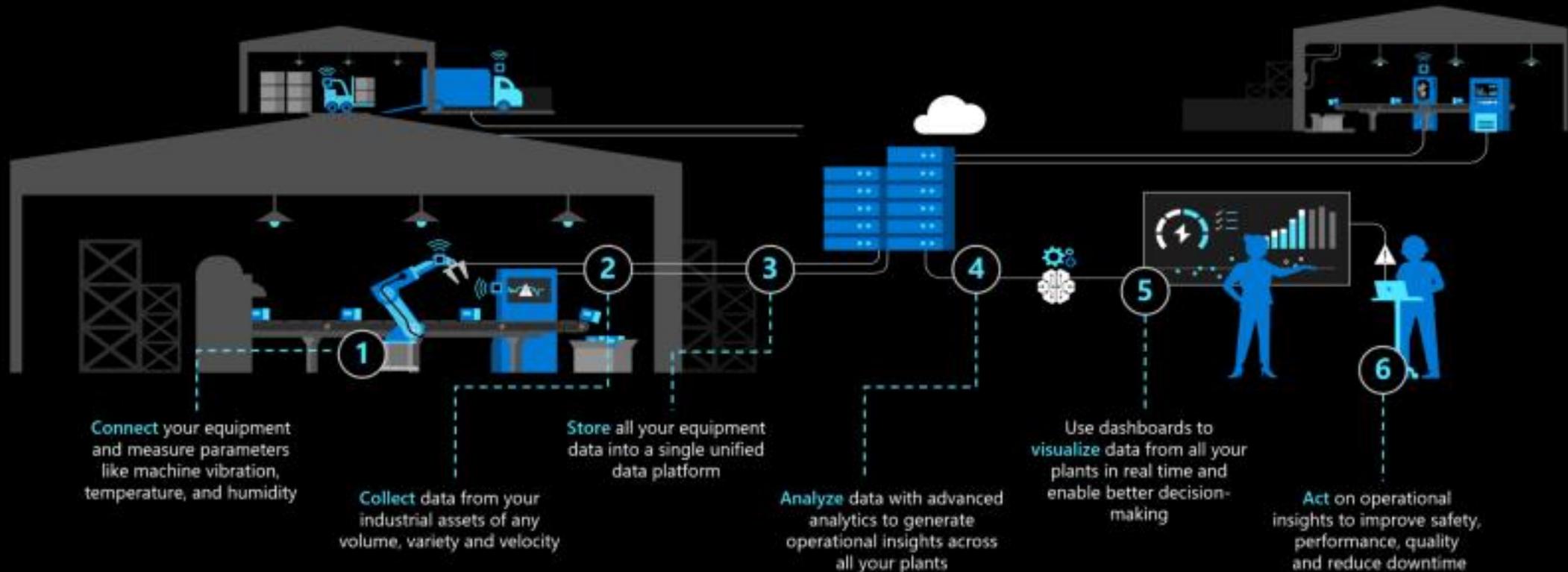
Dynamic Pricing Revenue Segmentation



Lead Time Reduction by real-time asset monitoring

How Remote Asset Monitoring Works

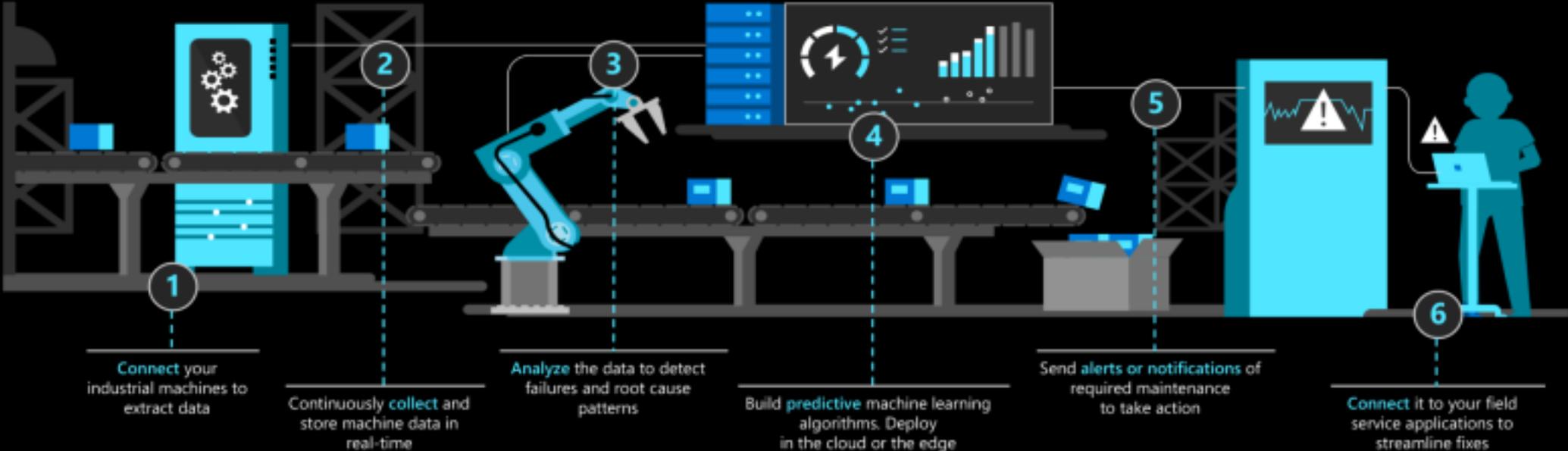
Use sensor data to gain real-time visibility into the health of industrial assets and improve production efficiency.



Predictive Maintenance

How Predictive Maintenance Works

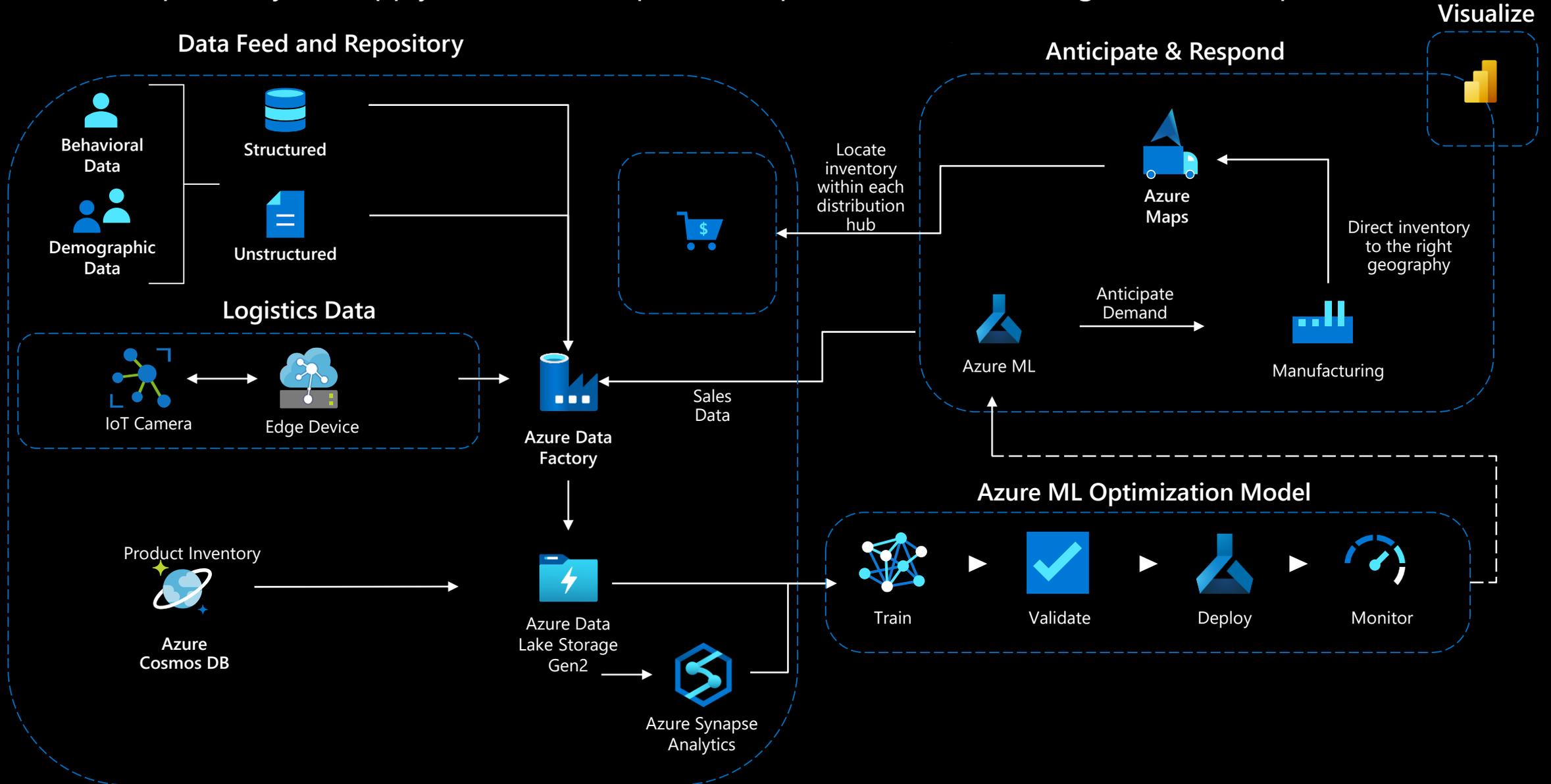
By analyzing data of IoT-enabled industrial equipment, manufacturers can predict timelines for maintenance events—streamlining costs, reducing downtime, and increasing equipment life.





Supply Chain Optimization Technical Overview

Optimize your supply chain to anticipate & respond to demand using broad & deep datasets

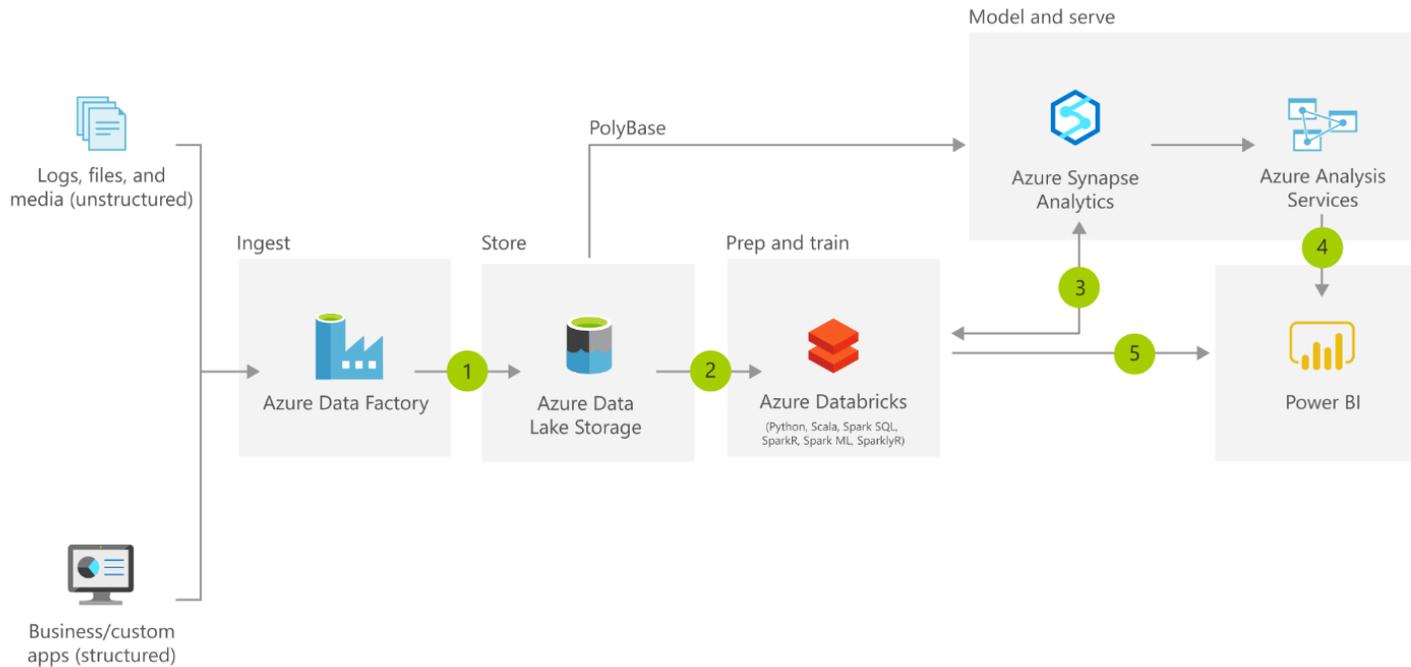


Intelligent Supply Chain - Inventory Performance Demo



Cargo Flow Optimization

Veraqor Azure architecture:



What is it

One-stop solution for seamless management of PL Sales and oil transportation logistics, optimizing vessel operations and cargo delivery.

Challenge

Managing PL Sales and oil transportation operations presents unique challenges, including real-time tracking of oil quantities, coordinating vessel schedules, optimizing transfer points, and ensuring compliance with oil capacity regulations.

Solution

The proposed solution leverages Azure Data Factory for seamless data integration and orchestration, ensuring smooth data flow from oil vessel sensors and input sources to the cloud. Utilizing Power Platform, we empower users to easily access and visualize real-time insights on oil quantities, vessel status, and delivery forecasts. Azure Synapse Analytics and DataBricks complements this by enabling advanced analytics and machine learning for predictive modeling, optimizing operations and enhancing decision-making in the oil transportation domain.

Benefit

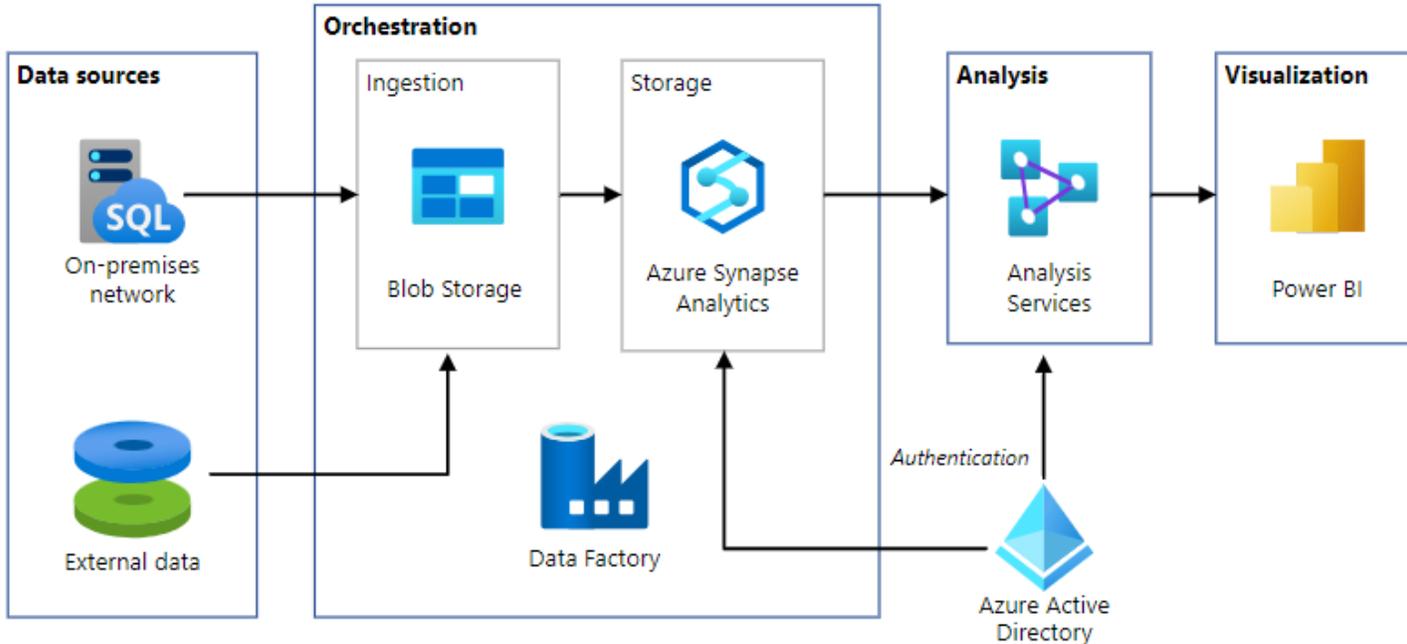
The implemented solution yields substantial benefits, including enhanced operational efficiency, real-time data-driven insights, streamlined oil transportation processes, optimized logistics planning, and informed decision-making, ultimately leading to cost savings and improved customer satisfaction.

Customer Evidences:



Smart Inventory Insight

Veraqor Azure architecture:



Customer Evidences:



What is it

Smart inventory solution to optimize the operational cost based on multiple KPIs such as frequency, lead time and categorization.

Challenge

Project inventories were being maintained and managed in Oracle JDE1 but they weren't being optimized due to lack of visibility and smart insights. Collaborative output across the warehouses, inventory levels, and shipment time didn't exist resulting in financial and management inefficiencies.

Solution

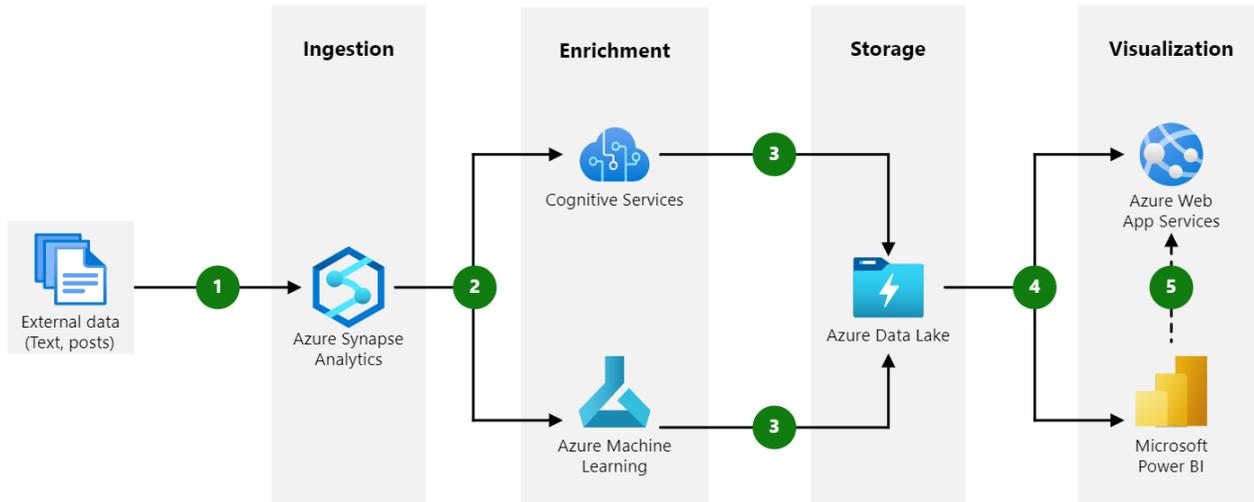
Created ETL pipelines for parallel ingestion using ADF and parked the data in Synapse to further analyze it. Consequently, landed the outcomes in business-friendly dashboards using PowerBI to make decision-making smarter and pro-active rather than reactive.

Benefit

With visible and predictable inventory levels and connected warehouse information, cost controlling was effectively improved. Wastage was eliminated and decision-making time and effort were cut multiple folds.

Retail Promotions Optimization : Planning and Forecasting

Veraqor Azure Architecture:



Customer Evidences:



What is it

A comprehensive platform for streamlined planning and optimized forecasting of retail promotions and events, enhancing efficiency and strategic decision-making for retailers.

Challenge

The challenge is orchestrating seamless retail promotions and events by efficiently managing creation, product pricing, historical analysis, supplier collaboration, and leveraging machine learning for accurate forecasting amidst a dynamic retail environment.

Solution

We use Azure Data Factory which facilitates data integration and orchestration, while Azure Machine Learning enables accurate forecasting. Power BI provides real-time insights for informed decision-making, and Azure Synapse Analytics ensures efficient data processing and analysis, ultimately optimizing retail promotions and events.

Benefit

The solution yields enhanced retail efficiency, data-driven insights, and optimized promotional strategies, resulting in increased sales and customer satisfaction.



+40%

Improvement in prediction accuracy in a pilot of over 700 retail stores

Situation

PepsiCo wanted to give its frontline sales force the tools it needs to effectively and efficiently stock and manage store inventories and displays so that customers in each store find just the product they want.

Solution

Field workers use the Store DNA App, built with Azure Machine Learning and its machine learning operations capabilities, to identify trends and consumption patterns on a per-store basis so that available stock matches customer demand.

Impact

PepsiCo is rolling out the Store DNA App to 14 US markets. Workers receive a tailored list of top priorities weekly store visits, and the company estimates its shifting 4,300 days of work a year from tedious tasks to value-add activities.

Carhartt



+200%

Revenue v. expectation in
new store locations selected
using Azure ML

Situation

Carhartt needed to factor in macroeconomic variables & the complexity of geographic-specific trends into their analytics & sales prediction forecasts to help them make quicker business decisions & remain competitive with online retail.

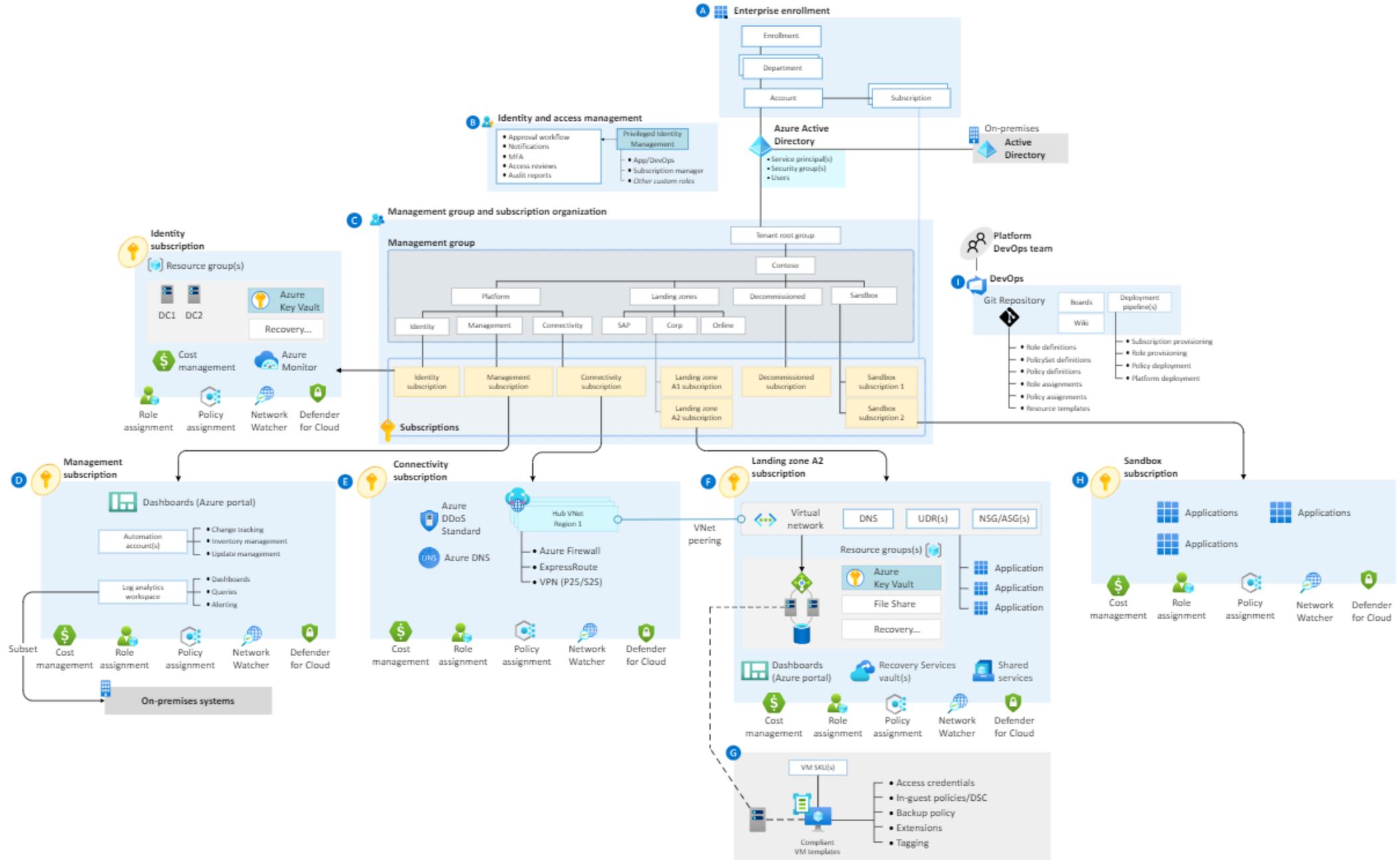
Solution

Carhartt used Azure Machine Learning to develop a new forecasting, selection, and go-to-market tool that combines more than 100 variables including climates, sales data, and consumer behavior.

Impact

Carhartt used the new tool to develop a list of new brick-and-mortar locations to help open three new stores. Within months, the new location exceeded revenues by over 200%. The tool is now deployed to optimize sales with big-box retailers, online, and all physical Carhartt stores.

Applicable Veraqor Accelerators / Foundational Accelerators



Veraqor Cloud Deployment Accelerators

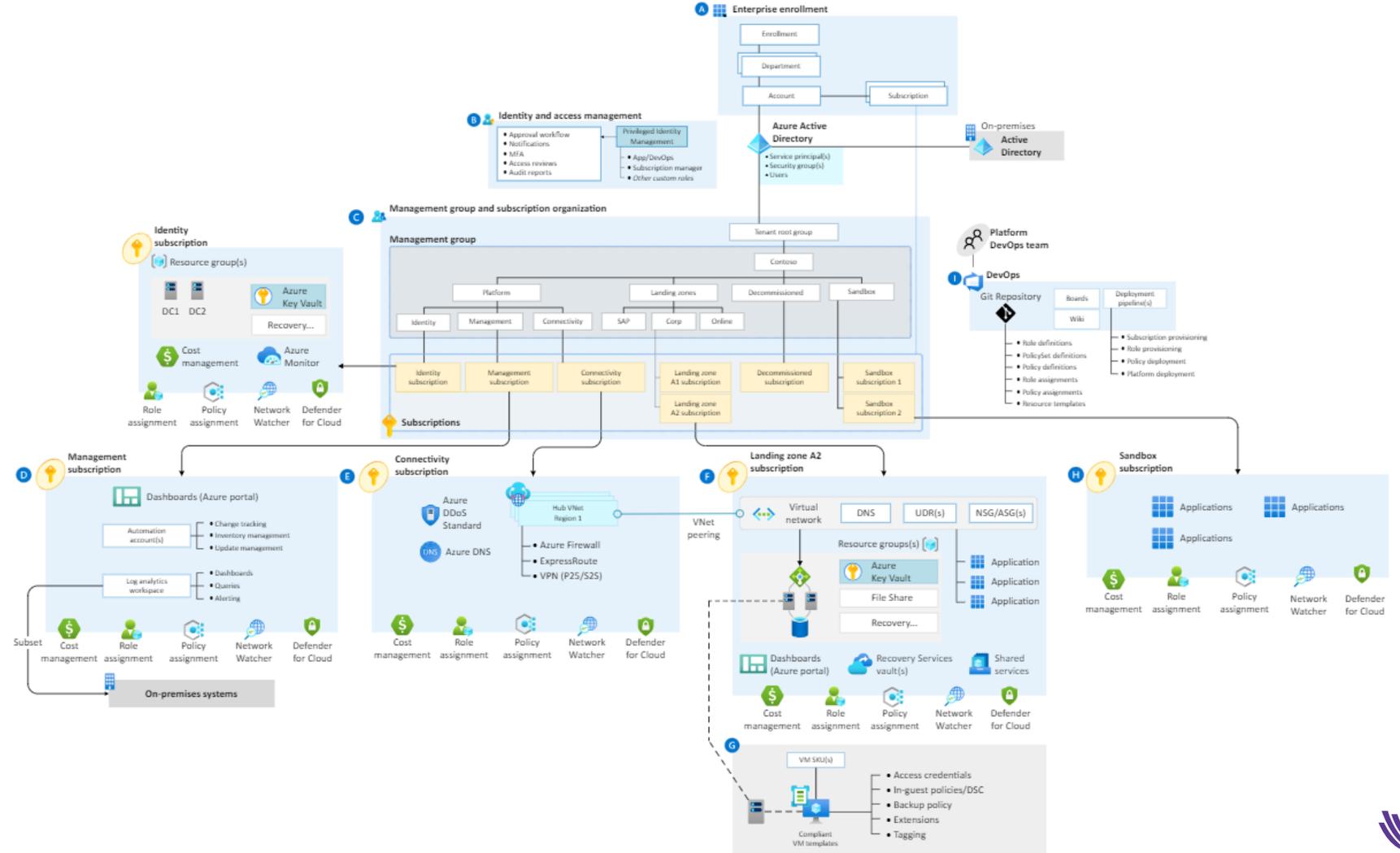
Ready-Made 1-Click Deployment Experience on Azure



Time-Saving: 2 - 3 Months



Investment Savings: > \$80,000

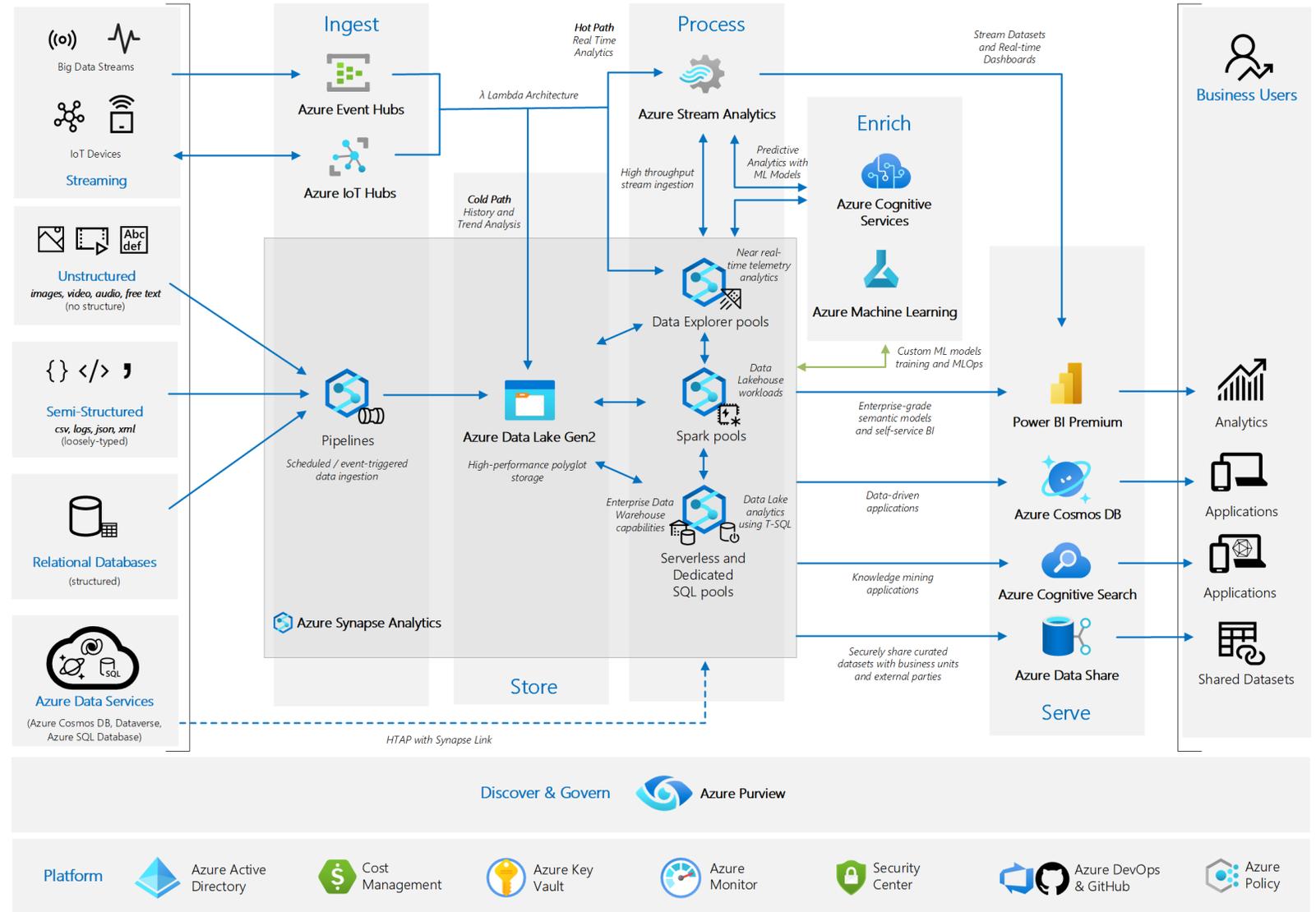


Veraqor Analytics Deployment Accelerators

1-Click deployment accelerates time to value by deploying all the fundamental components for Data & Analytics on Azure.

 Time-Saving: 1 Month

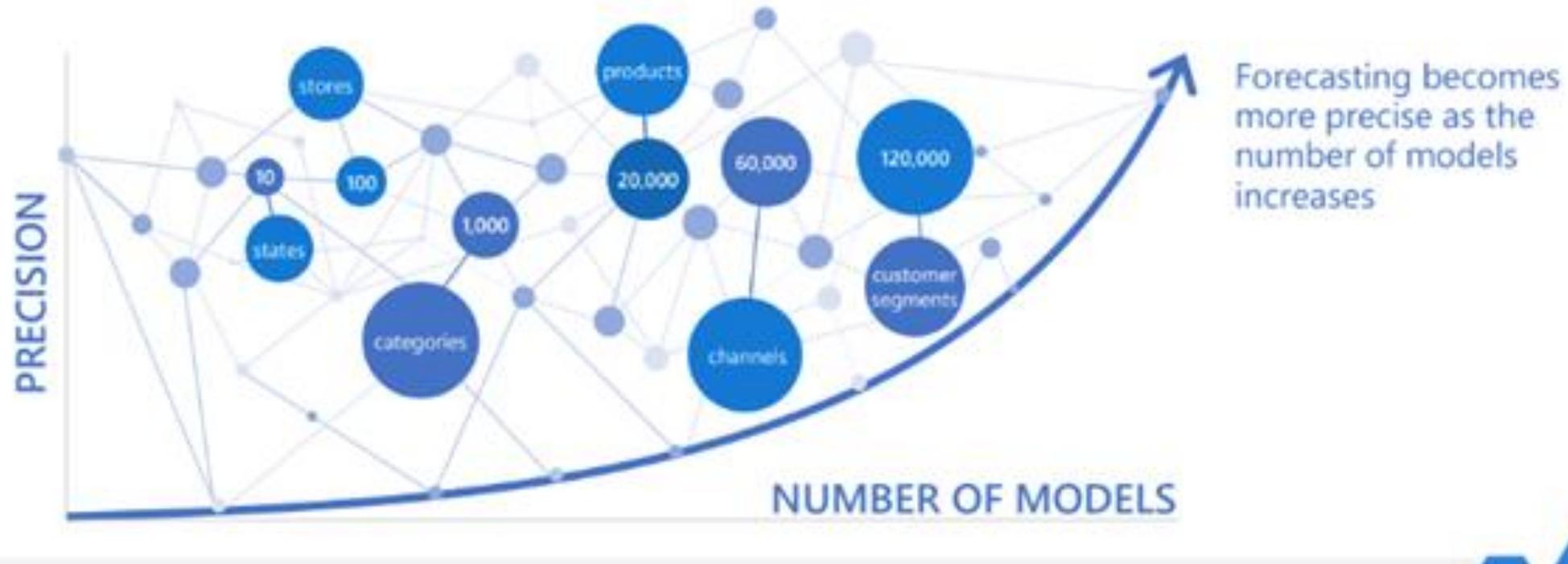
 Investment Savings: \$72,000



Veraqor Supply Chain Solution Accelerators

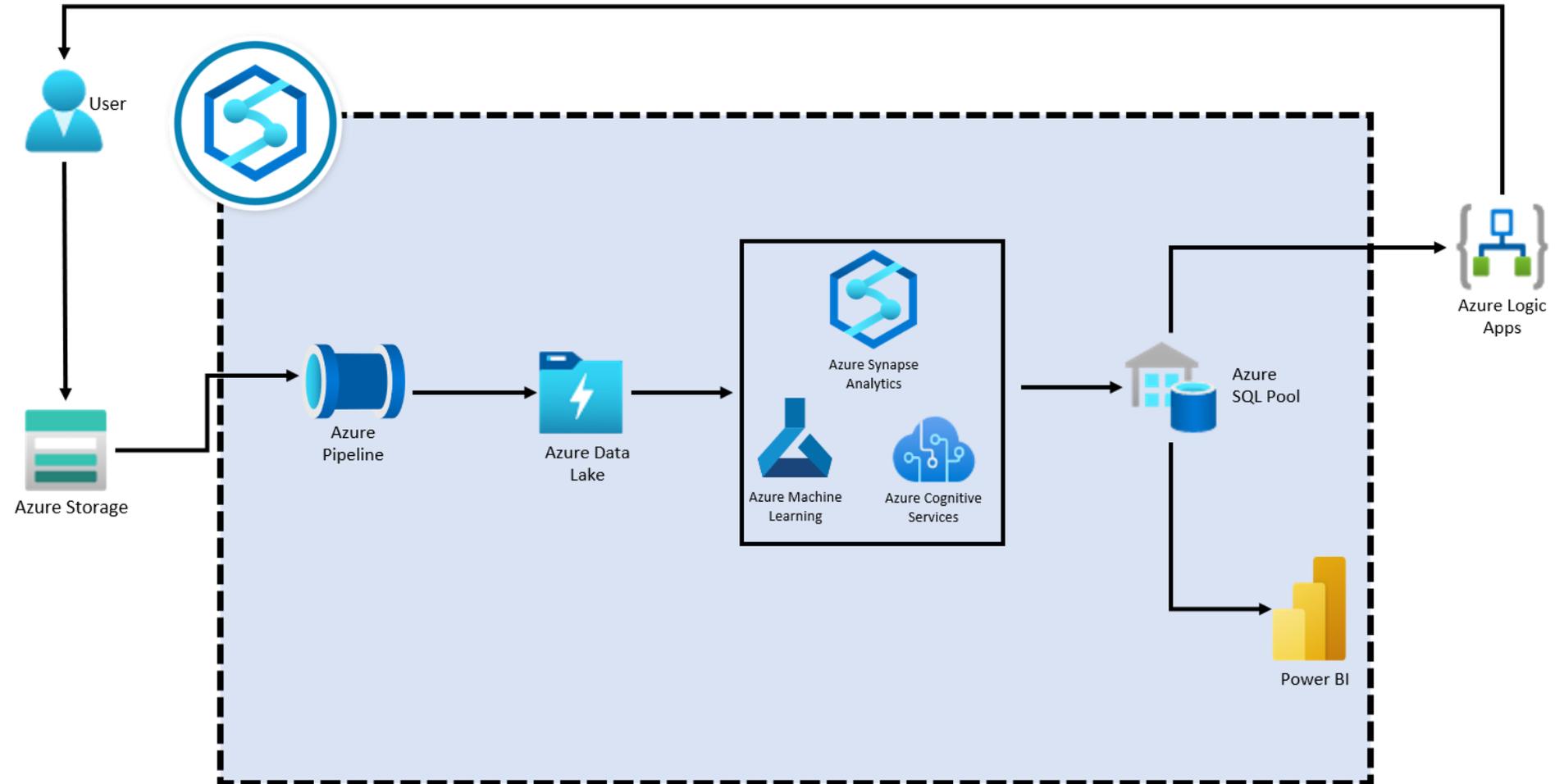
Veraqor Demand Forecasting Accelerator - Predict Inventory across 1000 of entities (stores, oil well, ATM machines, etc.) or points for multiple products using single ML Model.

As you train many models in parallel, accuracy increases, and demand forecasting becomes more precise, resulting in a 2% increase in profit margin for every 3% increase in forecast accuracy.



Veraqor Price Prediction Accelerator

Forecast prices of commodities and identify anomalies



What Can We Do For You?

Business Outcome Strategy Workshop & Roadmap

Understanding the complexities and best practices to get you where you want to be. A complimentary 2-hour advisory session to assess your current state and provide the guidance you need.

Deeper Solution Session & Briefing

See what Veraqor can do for you! An hour-long envisioning workshop explores the impact of digital transformation and innovation to help customers with vision-setting, strategy, roadmaps, and organizational alignment.

Architectural Design Sessions

This custom 2-hour session focuses on your technical solution objectives and aligns them with specific components of solutions to help you not only meet your goals but also capitalize on them.

Industry Best Practices, Tools & Frameworks

This custom 1-hour session focuses on guidance of best practices working directly with our specialized architects on innovative new capabilities and well-architected framework.

Complimentary Offers for Customers

Smart Operations Solution Briefing

Discover the future of supply chain optimization with our Intelligent Supply Chain Solution Briefing. In this focused session, our experts will provide you with a comprehensive overview of cutting-edge technologies and strategies that can revolutionize your supply chain operations.

Business Outcomes



A clear understanding of how emerging technologies can benefit your supply chain.



Identification of potential opportunities for improvement in your supply chain operations.



Insights into our tailored Intelligent Supply Chain solutions.

Investment
\$FREE
Duration 2 Hrs.

What you can expect

1 Agenda

Introduction: Meet our team and get an overview of the briefing's objectives.

Current State Assessment: Explore the current state of your supply chain operations, challenges, and pain points.

Emerging Technologies: Dive into the latest trends and technologies in supply chain optimization, including AI, data analytics, and BI.

Use Case Showcase: Discover real-world use cases and success stories of organizations that have transformed their supply chains.

Interactive Discussion: Engage in a collaborative discussion to identify potential opportunities for improvement in your supply chain.

Solution Overview: Gain insights into our Intelligent Supply Chain solutions and how they can be tailored to meet your specific needs.

Q&A Session: Get answers to your questions and concerns from our experts.

2 Briefing areas:

1. Operational Efficiency Enhancement:

- Streamline supply chain processes and workflows through automation and data-driven insights.
- Reduce lead times, minimize bottlenecks, and optimize resource allocation for increased operational efficiency.
- Achieve cost savings and improved profitability through reduced operational expenses and enhanced resource utilization.

2. Improved Decision-Making and Agility:

- Enable data-driven decision-making by leveraging advanced analytics and AI-powered predictive models.
- Enhance agility in responding to market fluctuations, demand variations, and unforeseen events with real-time insights.
- Optimize inventory management and demand forecasting for better stock levels, reducing excess or stockouts.

3. Enhanced Customer Experience:

- Elevate customer satisfaction through accurate order fulfillment, on-time deliveries, and improved product availability.
- Enable personalized services and faster response to customer queries and concerns, fostering loyalty and positive customer relationships.
- Enhance product quality and traceability, ensuring a superior customer experience and building a positive brand image.

Up to 2 Hours

Why Veraqor?

Innovative engagement with Microsoft Certified Professionals that add values into your business

- Playbook Automation
- Speedy Delivery
- Future envisioning with AI/ML
- Agile Delivery



veraqor
enabling data. unleashing potential.

Smart Operations Assessment

Designed for customers who wish to enhance efficiencies that provide a seamless, fast, and personalized end-to-end journey to meet ever-growing customer service expectations. Enhance product and service delivery with advanced insights and analytics that optimize planning and improve the fulfillment, material sourcing, and logistics of your supply chain.

Customer profile

Any Enterprise or SMC customer with executive sponsorship to enhance or build an Intelligent Operations Platform to solve Supply Chain business problems

Scope



Duration: SMC: ~2 Weeks / Enterprise: ~6 weeks

Cost: Starting at \$10,000



Process

Phase 1: Alignment to Operational business strategy

- Collaborative Business Outcome workshops will discuss:
 - Operational strategy, supply chain problems and risks,
 - Existing technology platform compatibility,
 - Supply Chain Use cases, and/or opportunity catalogue

Phase 2: Gap planning

- Document current operational pain points, analytics maturity assessment, and the as-is architecture

Phase 3: Future state architecture

- Create a optimization strategy, future state architecture [based on 1-2 use cases](#)

Phase 4: Post Assessment

- Select one workload as a pilot candidate



Partner profile: Veraqor is a Microsoft Gold Partner with 10+ years of experience of market-leading capabilities in Cloud, Data and AI.

Comprehensive Approach



Customer workshops

- The key focus areas for the workshops will be:
 - Alignment of Supply Chain strategy to this engagement
 - Current business problems areas including:
 - Demand forecasting
 - Inventory management
 - Optimal operating expense
 - Lead time reduction
 - Efficient logistics
 - Current toolsets, operating model & development processes
 - Maturity assessment of current enabling data platform
 - Current pain points related to the processes or toolsets
 - Security and governance considerations
 - Current and future use cases and vision (opportunity catalogue)
- Creation of optimization strategy with recommendations for a future state intelligent operations analytical platform based on the inputs/considerations gathered during the workshops, best practices, and relevant Technology platform products/services.



Stakeholders:

- Executive Sponsor
- Business Unit Leads
- Technology Leads

Deliverables



Insights, analysis, recommendations for enhancement documented with:

- Executive summary, customer business objectives
- Intended services include data, analytics and artificial intelligent based services to enhance supply chain operations
- Identified business risks – Relating to data and cloud governance.
- Modernization strategy – Actionable set of data platform and process recommendations, including practices and toolsets based on the selected use case/s.
- Roadmap from current state to desired state with Reference Architecture and Estimates
- Optional outcomes
 - Pilot workload deployment

Smart Operations

Proof of Concept (POC)

Unlock the potential of Smart Operations with a focused Proof of Concept (POC) tailored to the needs of supply chain optimization. Building on the insights and recommendations from our Smart Operations Assessment, this POC is designed to provide hands-on validation of how advanced insights and analytics can revolutionize your supply chain, making it more agile, efficient, and responsive to customer demands.

Customer profile

Any Enterprise or SMC aiming to unlock the full potential of Smart Operations for supply chain optimization and witness firsthand how it can make their supply chain more responsive, efficient, and adaptable.

Scope



Duration: SMC: 8 weeks
Cost: Starting at \$30,000



Use Case Selection:

- Together, we choose a focused supply chain use case that aligns with your business goals and is suitable for POC.

AI Model Development:

- We design and develop AI models tailored to your selected supply chain use case.

Foundational setup:

- We ensure the seamless integration of your supply chain data sources with Azure AI Services and analytics tools.

POC Execution:

- We run the POC, continuously monitor performance, and make necessary adjustments.

Performance Evaluation:

- We assess the POC's performance against predefined success criteria.

Insights Dashboard Prototype:

- Develop a prototype BI dashboard that visualizes the results and insights generated by the AI models, focusing on supply chain KPIs and reporting.



Partner profile: Veraqor is a Microsoft Gold Partner with 10+ years of experience of market-leading capabilities in Cloud, Data and AI.

Comprehensive Approach



Process:

Phase 1: POC Planning

- Collaboratively define the POC objectives and success criteria, focusing on supply chain optimization.
- Select specific supply chain use case(s) from the assessment recommendations that target areas such as demand forecasting, inventory management, and logistics optimization.

Phase 2: POC Development

- Develop and configure Azure resources to support the selected supply chain use case(s).
- Implement data analytics and AI models to enhance supply chain decision-making.

Phase 3: POC Testing and Evaluation

- Execute the POC using real supply chain data and scenarios.
- Measure and analyze key performance indicators (KPIs) to assess the impact of the implemented solution on supply chain efficiency.

Phase 4: POC Reporting

- Deliver a comprehensive report summarizing the supply chain optimization outcomes of the POC.
- Provide insights, findings, and recommendations for further supply chain enhancement strategies.



Stakeholders:

- Executive Sponsor
- Business Unit Leads
- Technology Leads

Deliverables



POC Execution Report:

- A detailed report showcasing the execution, results, and supply chain optimization insights gained during the POC.

Supply Chain Performance Metrics:

- Measurement and analysis of supply chain KPIs, demonstrating the tangible impact of the POC on key areas like demand forecasting accuracy, inventory turnover, and logistics efficiency (dependent on use case).
- A working prototype of a BI dashboard showcasing the potential for enhanced supply chain reporting, data visualization, and decision support.

Supply Chain Optimization Recommendations:

- Insights and actionable recommendations for scaling up the supply chain optimization solution based on the POC results.

Supply Chain Enhancement Roadmap:

- A strategic roadmap outlining the steps and timeline for transitioning from POC to full-scale supply chain optimization implementation.

Smart Operations Implementation

Elevate your supply chain to a new level of intelligence with our comprehensive Smart Operations Implementation service. Building on the insights and recommendations from our Smart Operations POC, this service takes your organization's supply chain optimization journey to the next phase. Harness the power of data-driven decision-making, AI-driven insights, and optimized operations to achieve greater efficiency, responsiveness, and cost-effectiveness in your supply chain.

Customer profile

Any Enterprise or SMC aiming to achieve the full potential of Supply Chain Intelligence through seamless implementation and experience a supply chain that's more agile, data-driven, and optimized for success.

Scope



Duration: 16 - 28 weeks
Cost: Starting at \$75,000



- Discovery and Planning
- Model Scaling and development
- Foundational Integration and Analytics Enhancement
- Implementation and Testing
- Training and Knowledge transfer
- Continuous improvement and support

Offer includes Veraqor implementation Accelerators for:

- Demand Forecasting
- Price Prediction
- Commodity Comparator
- Analytics and cloud deployment



Accelerators saves months of work and upwards of \$40,000 savings for you!

Partner profile: Veraqor is a Microsoft Gold Partner with 10+ years of experience of market-leading capabilities in Cloud, Data and AI.

Comprehensive Approach



Process:

Phase 1: Planning

- Collaboratively define project objectives, success criteria, and an implementation roadmap that aligns with your supply chain goals.

Phase 2: Development

- Implement from scratch or scale up the AI models and algorithms developed during the POC to meet production-level demands.
- Optimize and fine-tune AI models for real-time supply chain insights and decision support.
- Ensure seamless integration of supply chain data sources with Azure AI Services.
- Enhance the Analytics dashboards and reporting solutions for deeper insights and real-time monitoring

Phase 3: Implementation and Testing

- Deploy the integrated solution within your production environment..
- Measure and analyze key performance indicators (KPIs) to assess the impact of the implemented solution on supply chain efficiency for fine tuning and iterations.



Phase 4: Knowledge Transfer and Support

- Provide tailored training sessions to empower your teams with the skills to effectively use and manage the implemented solution.
- Monitor performance and adapt to evolving supply chain dynamics for sustained success.

Deliverables



1. Production-Ready Solution:

- A fully integrated, production-ready supply chain optimization solution based on AI-driven insights and enhanced BI reporting capabilities.

2. Optimized AI Models:

- AI models scaled and fine-tuned for real-time supply chain insights and decision support.

3. Enhanced Analytics Dashboard:

- Improved analytics dashboards and reporting solutions for deeper insights and real-time monitoring.

4. Effective User Training:

- Your teams empowered with the skills and knowledge to effectively use and manage the implemented solution.

5. Ongoing Support and Maintenance:

- Established support and maintenance for continued performance monitoring, enhancements, and adaptability to evolving supply chain dynamics.



Thank you!

Need help? Please write to:

mtu@veraqr.io

