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Adastra Manufacturing Offers

Enabling transformative industry solutions through Adastra's Three Horizon approach.

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About Adastra



Adastra Microsoft Partnership

Microsoft
Partner



Gold Data Analytics
Gold Data Platform
Gold Cloud Platform
Gold Datacenter
Gold Application Integration

Adastra: Go-To Partner for Data & AI

Microsoft IMPACT Award Recipient:

- 2021 Analytics Impact Award
- 2021 AI Impact Award
- 2021 Data Platform Modernization Award
- 2020 / 2019 Commercial Partner of the Year
- 2019 Manufacturing Innovation Impact Award

Azure Migration Partner

Advanced Specialization for Analytics

Advanced Specialization for Windows / SQL
Server Migration to Azure

Lead Canadian Partner for Synapse Migration
/ Implementation

Product Team Collaboration for Azure
Synapse / Azure Purview / Azure Databricks



Our Manufacturing Azure Customers





Adastra Difference

Client Focused



Strategy Focused

We develop solutions that meet client's current and future business needs.



Value Driven

We deliver data-driven value to our customers with measurable ROI.



Nimble

We share knowledge and expertise with nimble work structures that allow us to scale as needed.



Transparent

We work with our clients to manage scope, timelines and level of detail.

Best-In-Class Solutions



End-to-End Data Services

We provide services from inception to deployment and maintenance for effortless client execution.



Excellence of Execution

Nothing matters if it can't be delivered on time, on budget, and within scope.



Top Talent

We hire only the best and the brightest and invest in their training and development.



Best Shoring

Top global experts can be assigned to take advantage of economies of scale and provide 24/7 delivery.

Data

AI & Analytics

Cloud

Governance

Digital



Adastra Manufacturing Approach



The New Normal in Manufacturing



71% of B2B companies are at risk of losing customers by not being fully engaged



80% of manufacturers expect that improved factory connectivity will help them to increase output levels



83% of manufacturers said that selling products as services would increase profits

New Priorities



Growing skills gap & deteriorating assets



Improved reporting, more natural interfaces, and efficient training.

Dynamically changing customer needs & product variability



Predictive inventory management, customized quoting and contracting.

Eroding Margins & Rising Costs



Increased operational efficiency, automatic asset maintenance, and less replacements.



Key Drivers

Supply Chain

90% of manufacturing supply chains will use cloud applications within supply chain fulfillment by end of 2019

Factory Of The Future

80% of manufacturers expect that improved factory connectivity will help to increase output levels

Digital Twin

40% of operational processes will be self healing and self learning

Connected Devices

The IIOT market is forecasted to surpass 176 billion by 2022

Product As A Service

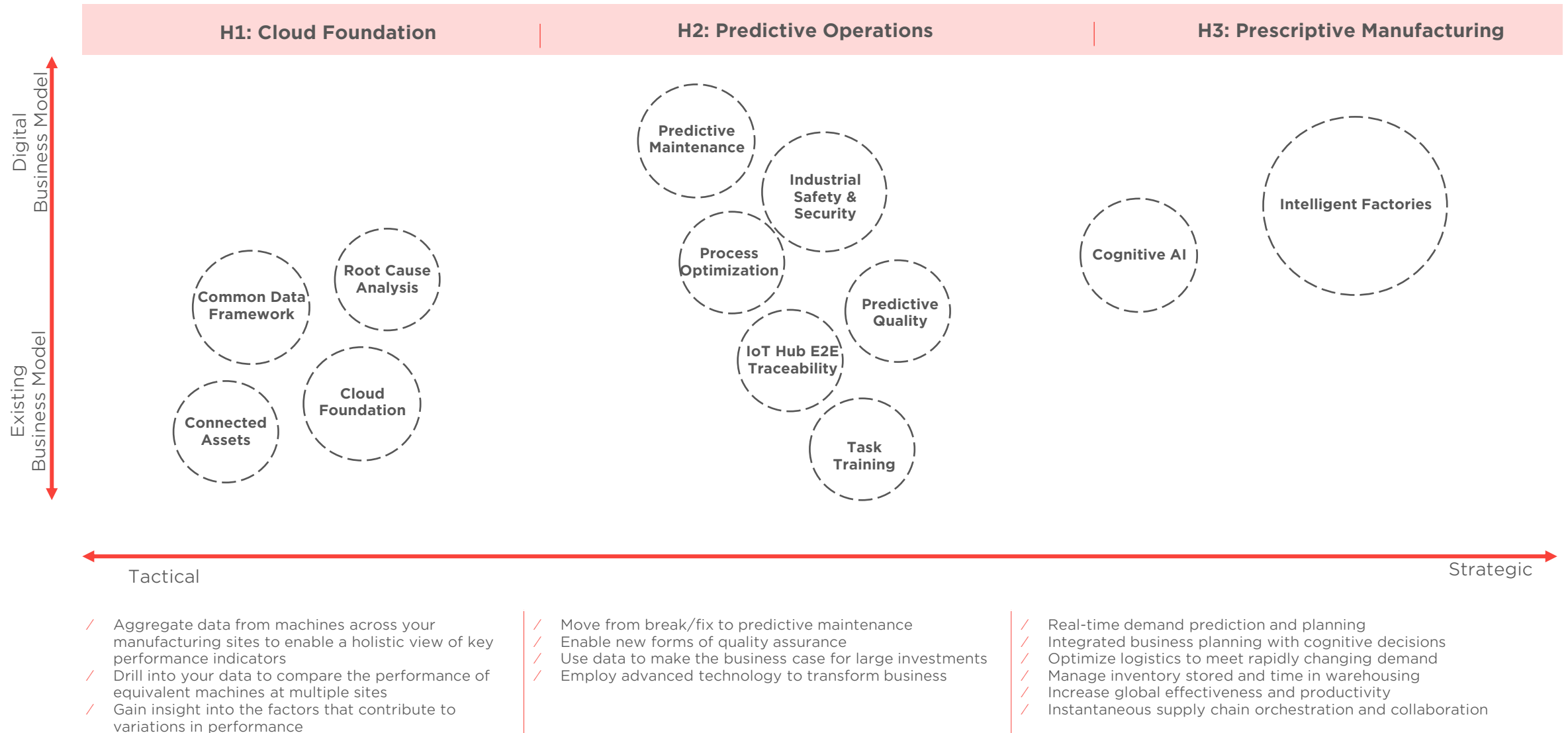
83% of manufacturers said that selling products as a service would increase profits

Customer Experience

Customer experience is predicted to overtake price and product as the key brand differentiator by year 2020



Horizons Of Factory Of The Future





Adastra Manufacturing Solutions



Operational Visibility



Horizon 1: Enterprise Analytics For Self-Service BI

PROBLEM

Existing 300+ customers required a locally installed and managed reporting / analytic solution. Local deployment caused significant overhead, higher support costs, slow new capability integration, and limited capabilities for customers.

SOLUTION

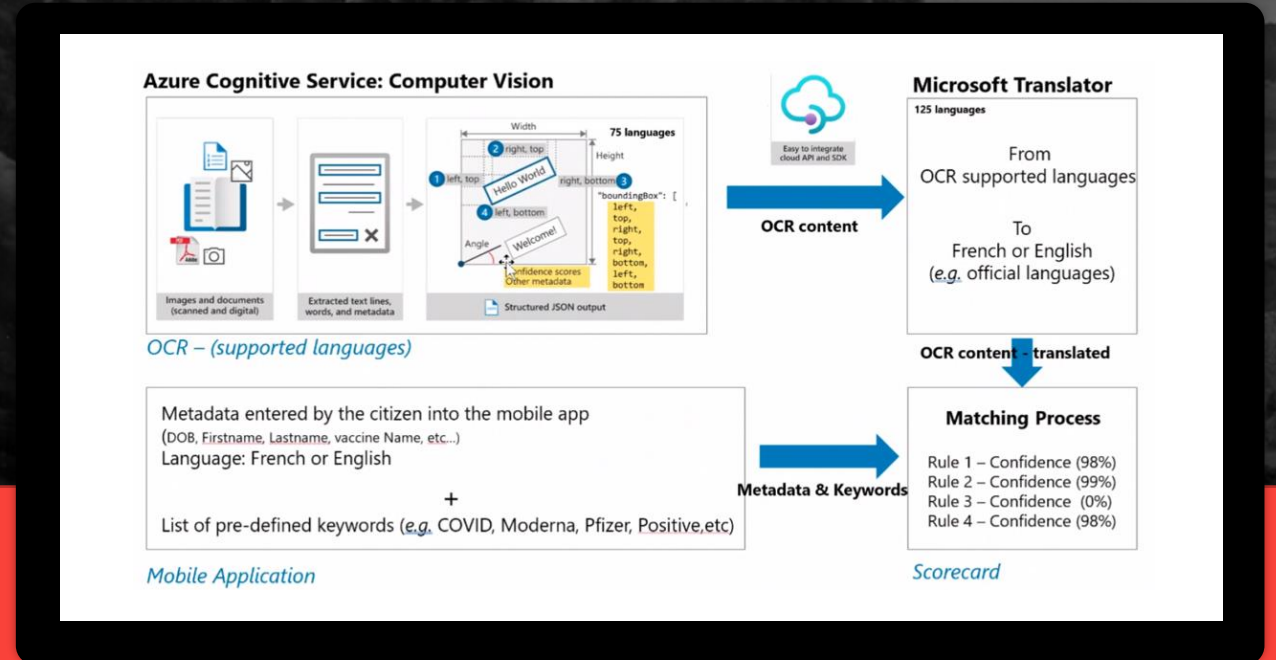
Created a centralized analytics platform, collecting real time telemetry data from 300+ plants, to support both live (warm) and historical (cold) path analytics. Introduced new advanced analytic capabilities to customers, and provided a better user experience.

RESULTS

Customer productivity increased by leveraging analytic data, enabling proactive maintenance and more efficient equipment use. New analytic services became a differentiator for the manufacturer.



Text Translation



Horizon 1: Text Translation of Global Documents

PROBLEM

Global manufacturing organizations will keep information in different languages, worldwide, making identifying and collating information a strenuous task.

SOLUTION

Leveraging Azure Cognitive Services "Computer Vision" and "Language Translation", through Adastra's real time / API solutions, documents are automatically translated from 175 different languages to the required target language, enabling global access to

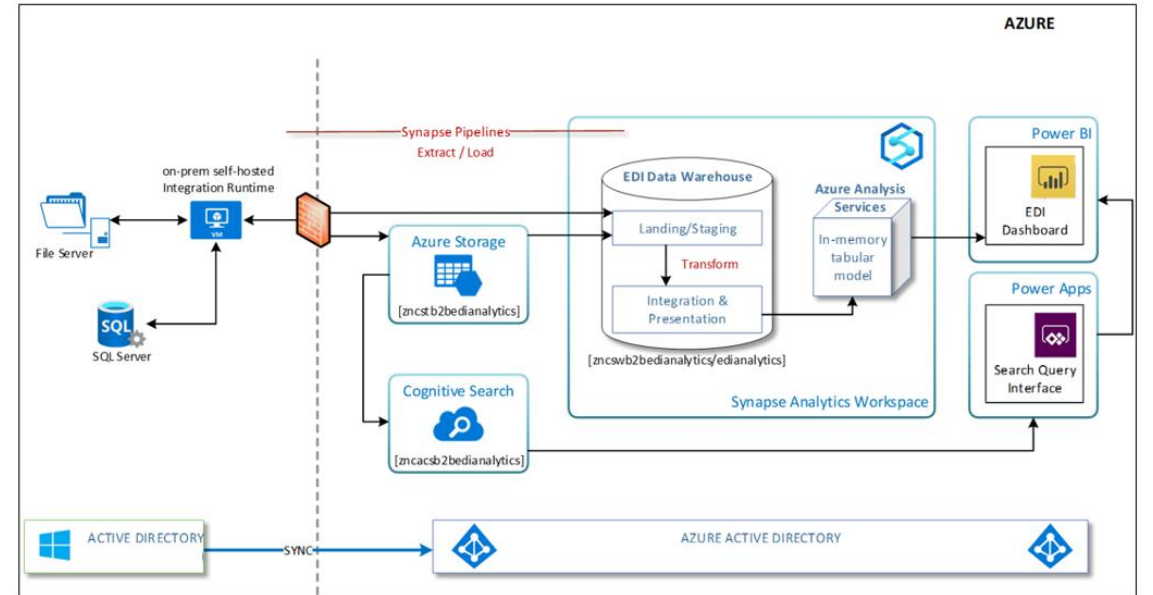
critical content.

RESULTS

Improved organizational knowledge sharing and decision making, by removing language barriers as a blocker. Make better manufacturing business decisions by leveraging global knowledge.



Enterprise Search



Horizon 1: Quick and Efficient Enterprise Search

PROBLEM

With limited visibility into existing millions of EDI transactions and documents, searching and reporting on relevant data is difficult and time consuming.

SOLUTION

EDI Data Lake, search and reporting solution with an Azure Framework to populate with EDI transactions and documents in common business formats. Establish EDI processing via Cognitive Search, Synapse Provisioned SQL Pool and Azure Data Lake Index and connect the documents to enable search.

RESULTS

Improve productivity by providing a real-time searchable database with powerful Power BI reporting and alerting processes. Available applications that can compare current and historic purchase orders to compare changes. Find relevant content in minutes rather than days.



Production Operations



Horizon 2: Anomaly Detection on In-Production Manufacturing Machines

PROBLEM

Manufacturers lack visibility into the production quality of their supply chain, leading to significant scrap if not identified and prevented

SOLUTION

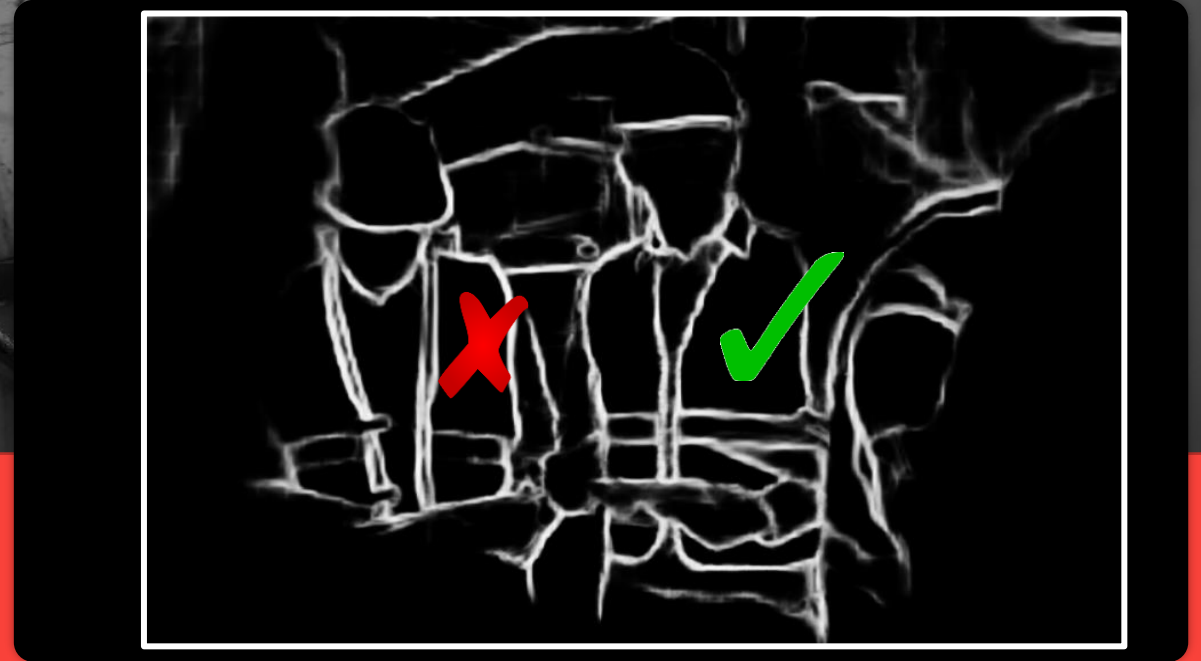
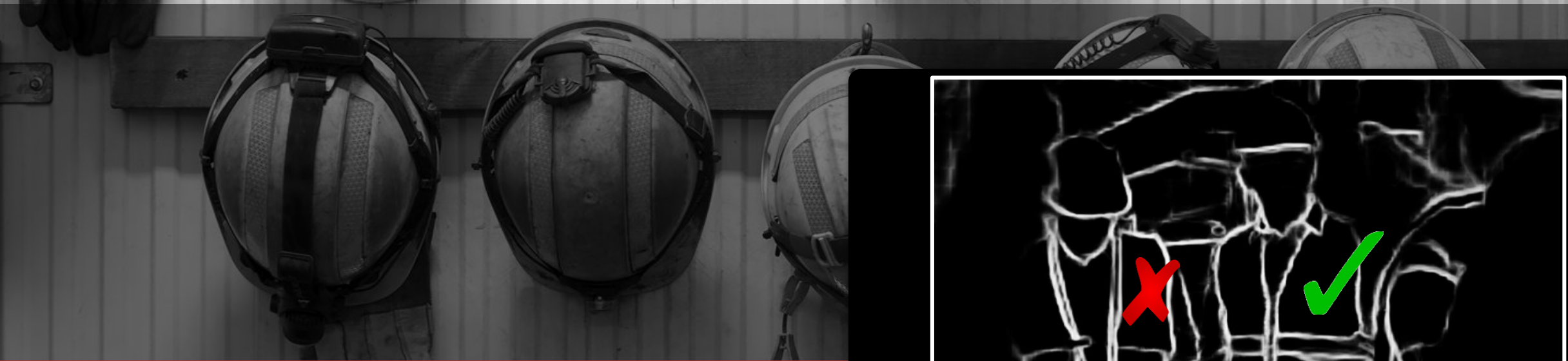
Use AI to monitor streamed images, to identify anomaly in the manufacturing process, stopping production and preventing wasted scrap. Provide visibility to the process via a Power BI dashboard, monitored by the line manager.

OUTCOME

Significant cost reduction in scrap, as bad pours are stopped pre scrap rather than post scrap. **Reduces scrap by >50%, saving >\$1M per plant.**



Cognitive Vision - Safety



Horizon 2: Anomaly Detection of Safety Procedures

PROBLEM

Without proper use of Personal Protective Equipment (PPE) such as high visibility safety apparel, there is an increased risk of injury to workers operating in different manufacturing environments.

SOLUTION

Implement a computer vision-based detection model which leverages advanced image processing and object detection techniques to identify safety vests in manufacturing site video streams, coupled with edge detection methods to flag vests which are not properly secured.

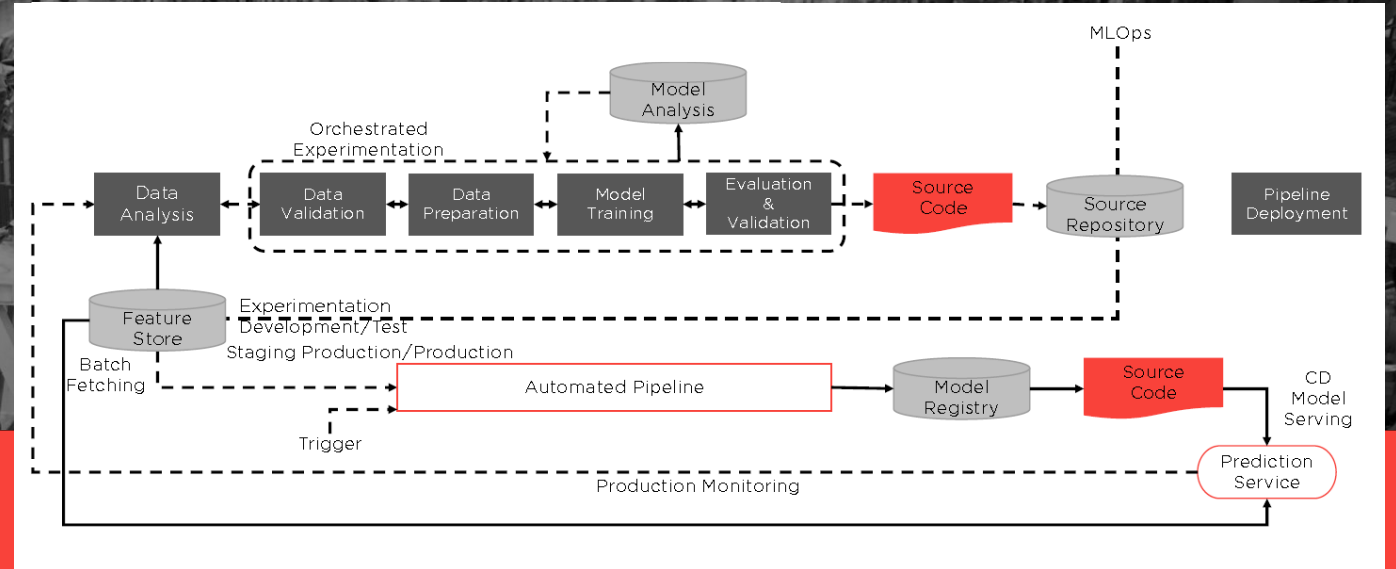
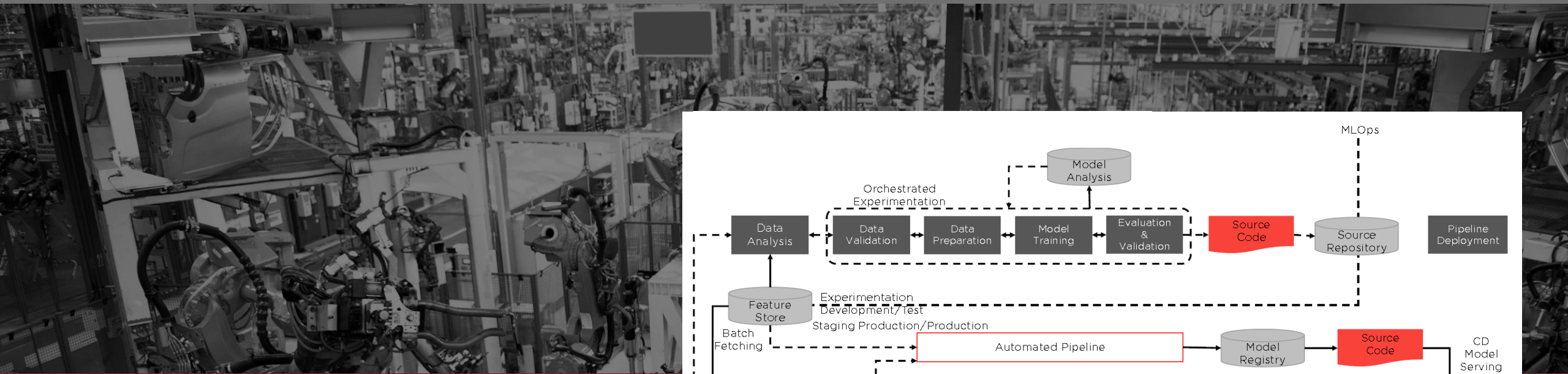
Enable a notification system which notifies site managers when there is a safety risk.

RESULTS

Reduced safety risk to manufacturing employees through enhanced monitoring of safety vest adherence, leveraging video analytics and computer vision capabilities.



Production Operations



Horizon 2: Predictive Maintenance for Improved Machine Availability

PROBLEM

Unexpected disruptions, caused by machine failure can have major cost implications in the production and can impact an organization's ability to meet targets.

SOLUTION

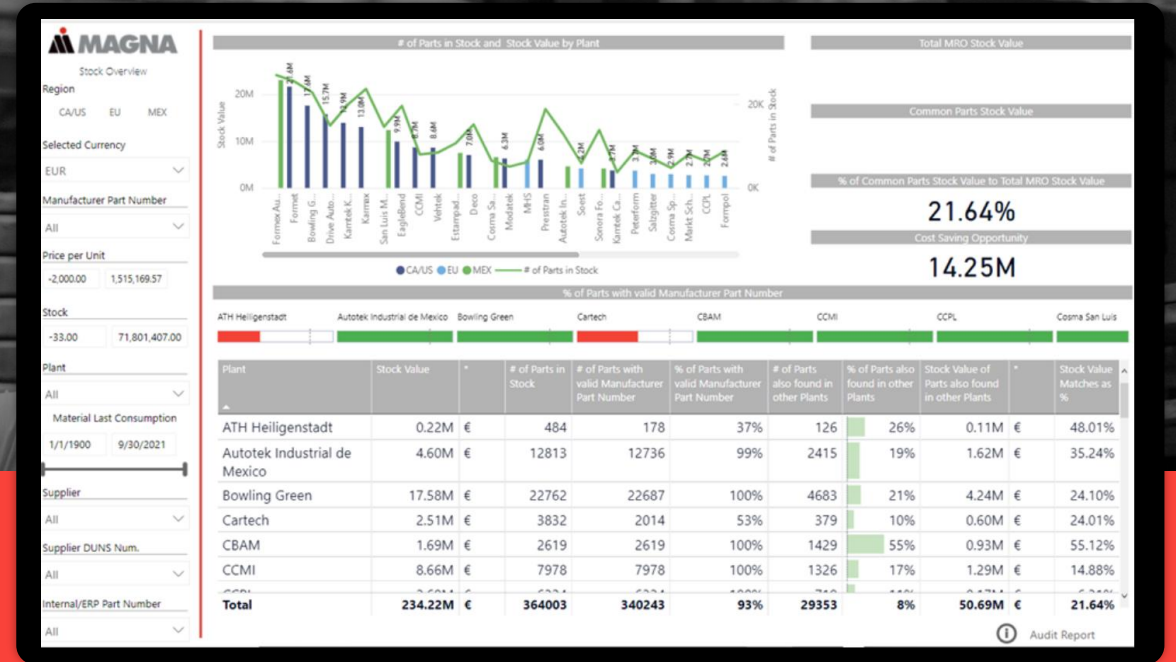
Use of text classification and machine learning methods to analyze historical data and recommend the best solution. Implementation of an intelligent assistant for mobile devices that suggests recommended steps to solve the problem.

OUTCOME

Improved incident response time by >20% and downtime minimization, **saving >\$5M per year in averted expenses.**



Supply Chain Optimization



Horizon 3: Improved inventory control for operational efficiency and cost reduction

PROBLEM

Lacking visibility into plant-level inventory, manufacturers experience cost discrepancy of plant parts and miss on the opportunity to share surplus supplies between facilities.

SOLUTION

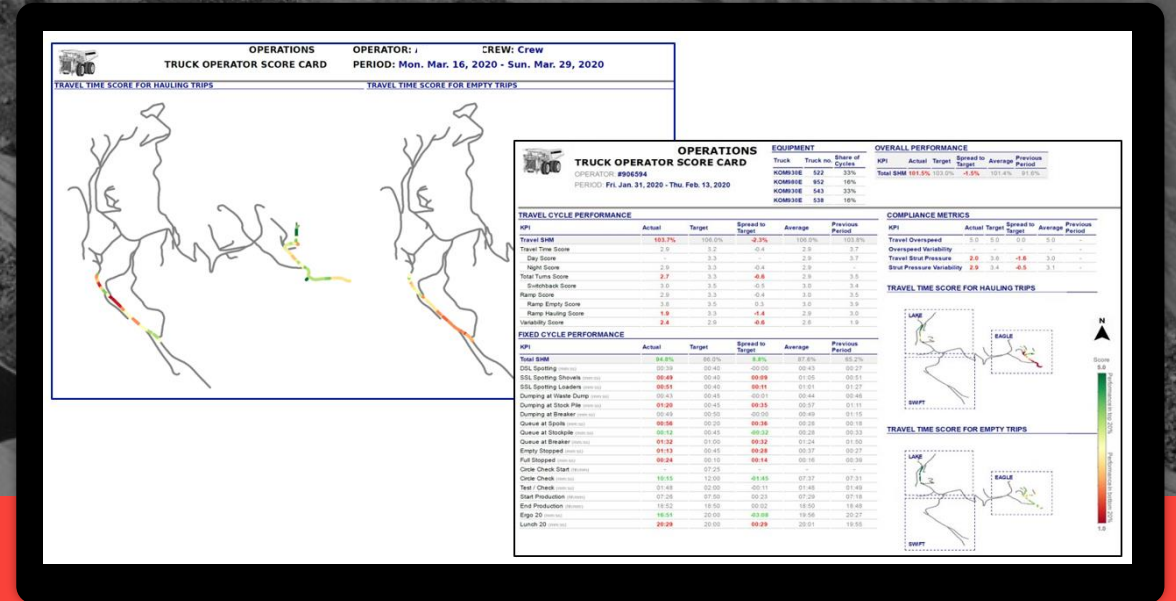
Centralized analytics platform to analyze data from multiple plants in near real-time, integrate and standardize parts, supplier and pricing details, to enable advanced analysis and identify opportunities for cost savings and efficiency improvement

RESULTS

With end-to-end insights, the manufacturers can conduct real-time analysis to improve inventory control and reap economies of scale between plants through inter-plant spare parts transfer, **resulting in 20% sourcing cost savings.**



Asset Yield Improvement



Horizon 3: Asset tracking and route optimization for elevated performance

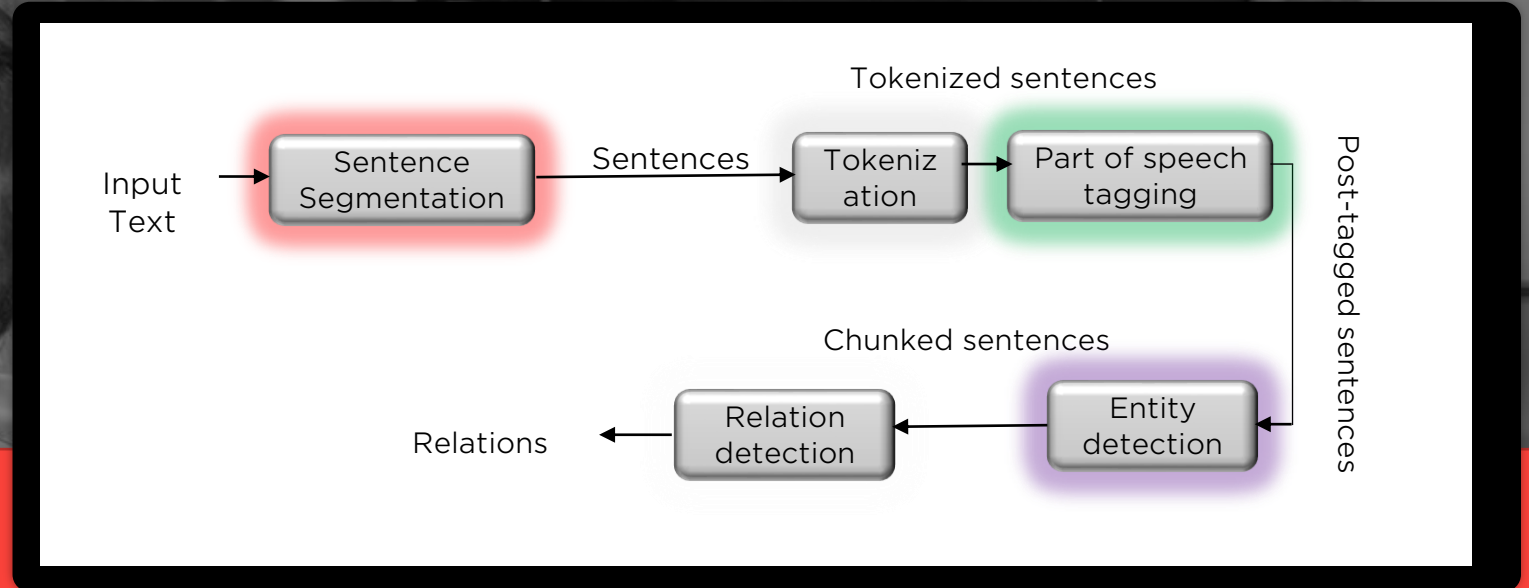
PROBLEM
Vehicles are not being used at the fullest extent at manufacturing and mine sites, due to lack of visibility of truck operator.

SOLUTION
Collect IoT data in real time, from trucks, to track how they are performing on routes/ load delivery, modern data warehouse in Azure. Compare truck operator performance against other truck operators, to determine where additional training can help improve poorly performing operators.

RESULTS
Improved truck operator performance at sites by 5%, optimizing truck assets more effectively and reducing overall truck costs, **realizing >\$8M / year in value from existing assets.**



Knowledge Mining



Horizon 3: Use AI Driven Knowledge Mining to Expand Insights

PROBLEM

Miners have limited visibility into their backoffice documents, making locating information intensive and time consuming.

RESULTS

Build a series of AI-powered intelligence modules that can be surfaced through a REST API for inference and incorporation into downstream processes

OUTCOME

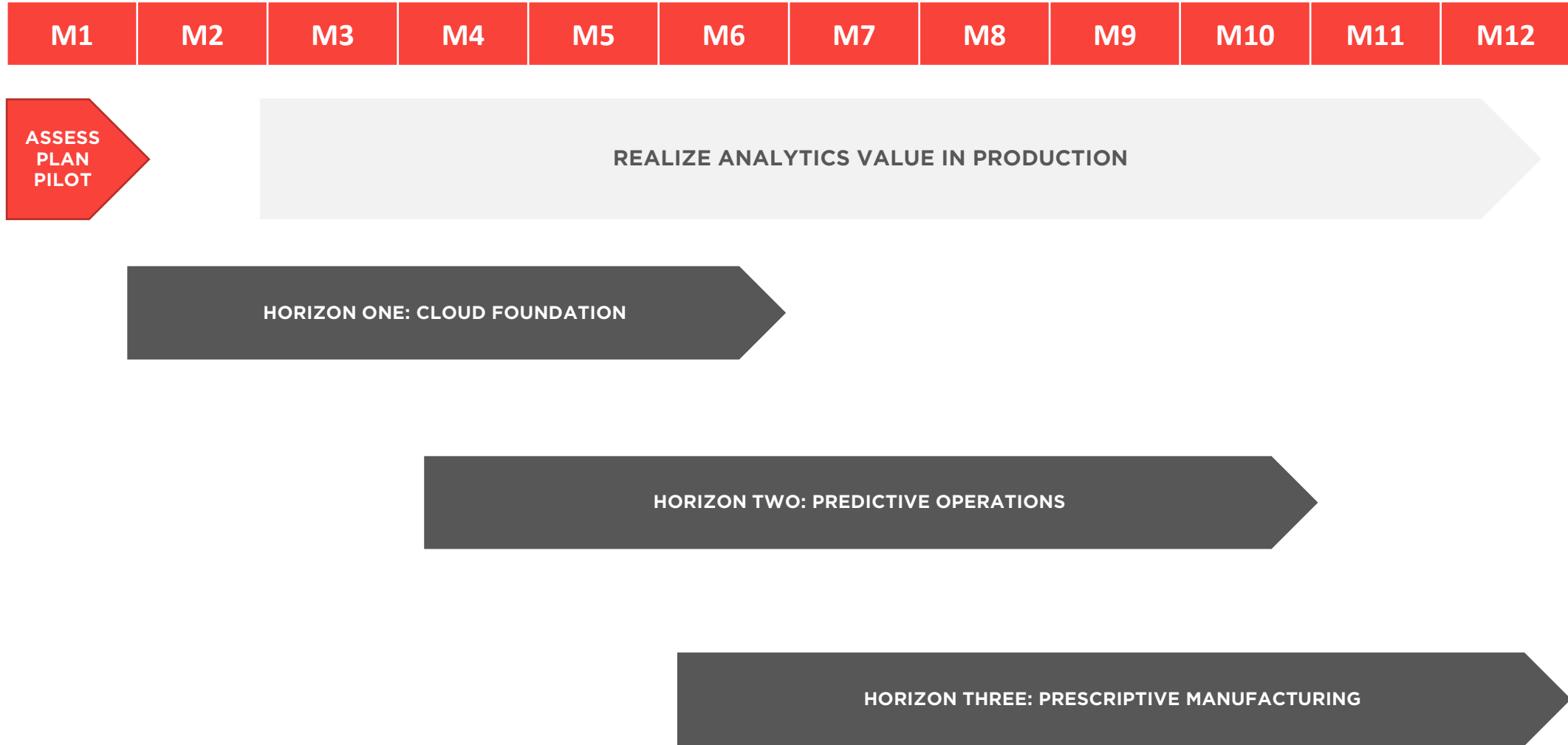
Accelerated time to find relevant information that supports the generation of their safety standard documents as well as to automate their templates



Getting Started



Roadmap To The Factory of The Future





30-Day Migration Assessment

Kick-Start Your journey To The Factory Of The Future With a Select Adastra Solution



**Operational
Visibility**



**Asset Tracking &
Optimization**



**Predictive
Maintenance**



**Anomaly
Detection**



**Inventory Supply Chain
Optimization**

Our no-commitment offer will accelerate your Azure Synapse & IIoT adoption and address current and future analytics goals, delivering tangible business value.

- / Identify future-state IIoT goals
- / Assess current IIoT environment and IIoT connectivity
- / Validate analytics logic for implementation in Azure IoT / Synapse
- / Design / size / cost Azure IoT / Synapse service design and network design
- / Define security design for Azure IoT / Synapse environment
- / Define technical governance for Azure IoT / Synapse environment
- / Build migration roadmap / plan



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