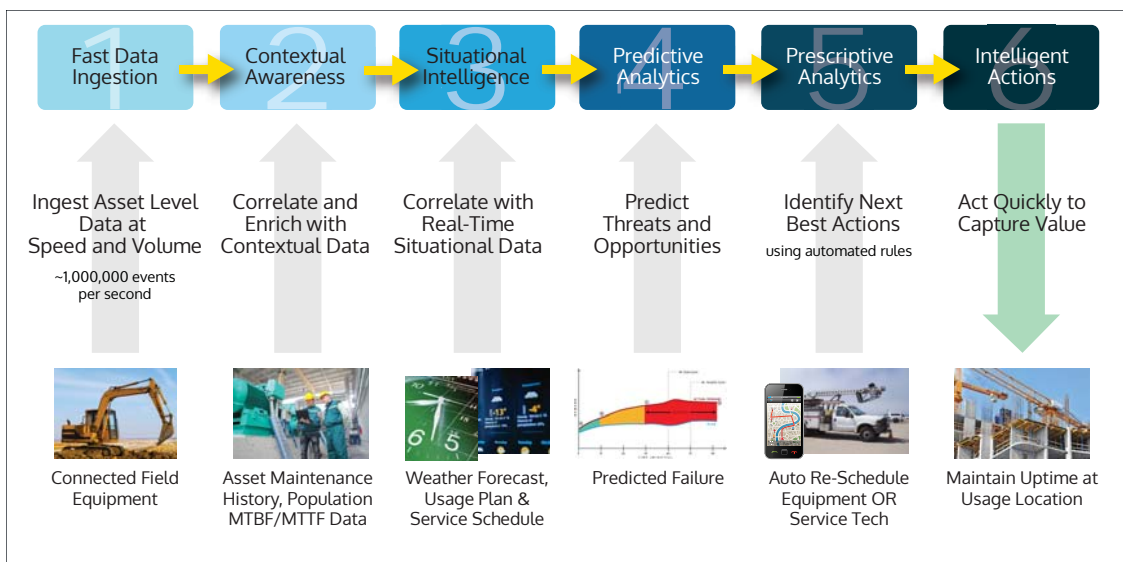# Vitria Analytics Value Chain
for Manufacturer's Equipment in the Field

CHALLENGE: Manufacturers need to address the ongoing maintenance and performance management requirements of their equipment in the field efficiently to meet the increasing demands of customers.

SOLUTION: Stepping through the value chain concept used in Vitria's IoT Analytics platform demonstrates the key capabilities that can be leveraged to address these challenges.

1 Fast Data Ingestion	2 Contextual Awareness	3 Situational Intelligence	4 Predictive Analytics	5 Prescriptive Analytics	6 Intelligent Actions
Ingest Asset Level Data at Speed and Volume	Correlate and Enrich with Contextual Data	Correlate with Real-Time Situational Data	Predict Threats and Opportunities	Identify Next Best Actions using automated rules	Act Quickly to Capture Value
~1,000,000 events per second					
Connected Field Equipment	Asset Maintenance History, Population MTBF/MTTF Data	Weather Forecast, Usage Plan & Service Schedule	Predicted Failure	Auto Re-Schedule Equipment OR Service Tech	Maintain Uptime at Usage Location

1) Ingesting data at speed and volume from the IoT sensors and devices on a typical piece of equipment used at customer sites is the first key step.

2) This data is then correlated with contextual and historical data to provide a baseline for advanced analytics. Contextual data includes information like asset maintenance history, mean time between failures, and other historical data.

3) The next step is to add real-time situational data to the stream to provide information that can inform real-time decisions. This could include data such as weather forecasts and equipment usage plans.

4) A critical step is to anticipate equipment behavior using predictive analytics that are based on machine learning. For equipment manufacturers, this usually means identifying potential failures or malfunctions.

5) The next step in the analytics value chain is to apply prescriptive analytics to determine the next best action to take.

6) This next best action could be a wide variety of actions – real-time and automatic rescheduling of repair routes or dispatching a specialized service technician to a critical location. The goal is to capture value quickly and ensure 100% uptime.

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Vitria's Analytics Value Chain – The Key to Timely Outcomes in IoT

Analytics on the tremendous volume of data in The Internet of Things (IoT) offers great potential to create new business value – but it requires a unified approach to analytics. Analytics must be executed in real-time across the Analytics Value Chain (streaming, historical, predictive, and prescriptive analytics) with relevant contextual and situational data. This capability paired with the next best action creates the greatest value - as shown in the figure below. Vitria's Advanced Analytics Platform for IoT is the fastest way to achieve these results.
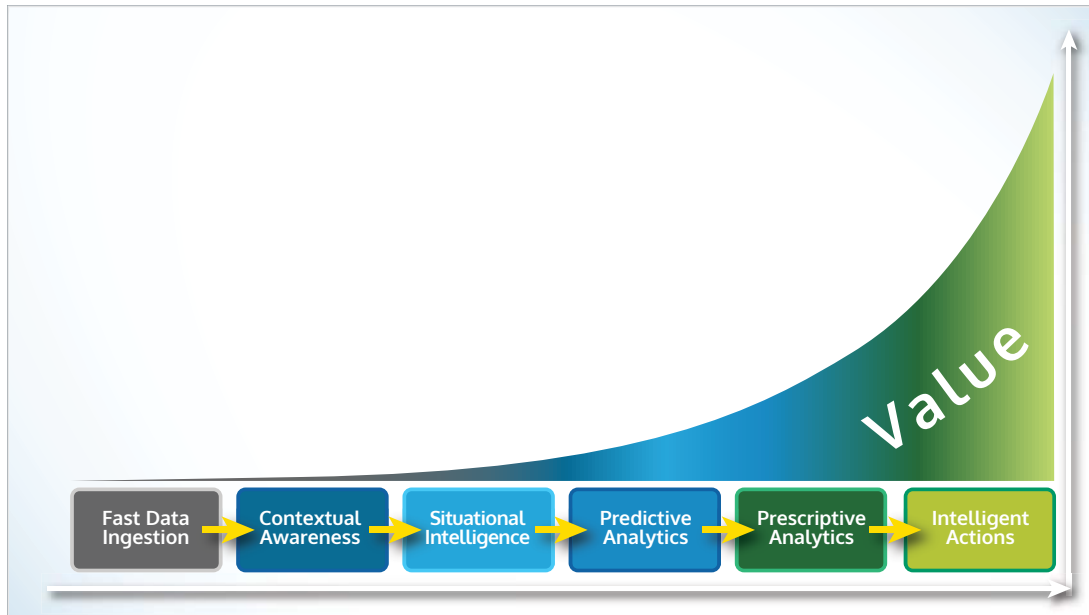
1) Ingesting data at speed and volume from IoT sensors and devices sets the stage for additional processing.

2) This data is then correlated with contextual and historical data to provide a baseline for advanced analytics. Contextual data can include information like geographic data or historical sales information.

3) Situational data and intelligence is the next stage of refinement and increased value. This includes information such as weather or customer location.

4) The next step is to predict failures, anomalies, or patterns using predictive analytics based on machine learning over historical and situational data.

5) The next step in the analytics value chain are to apply prescriptive analytics to determine the next best action. This could be a wide variety of actions such as better customer service or avoiding equipment downtime.

6) The final critical step in the value chain is to execute the real-time action to capture value.

About Vitria Technology

Vitria's advanced analytics solutions empower enterprises and industrial customers to achieve better outcomes faster in their business operations.

The company was founded in 1994 and has a long history of success in streaming analytics, business process management, enterprise application integration, and operational intelligence. Vitria is also a leading player in the rapidly growing IoT (Internet of Things) analytics market.

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