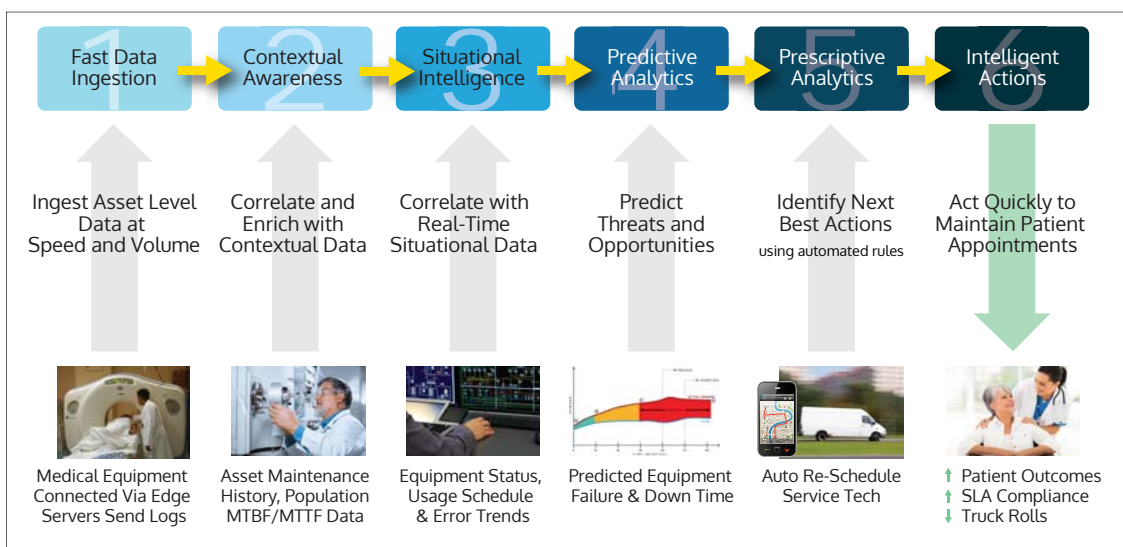


# Vitria Analytics Value Chain for Medical Equipment

**CHALLENGE:** Manufacturers of medical equipment need to anticipate maintenance issues with their equipment and fix them before they lead to degradation in the quality or delivery of patient services.

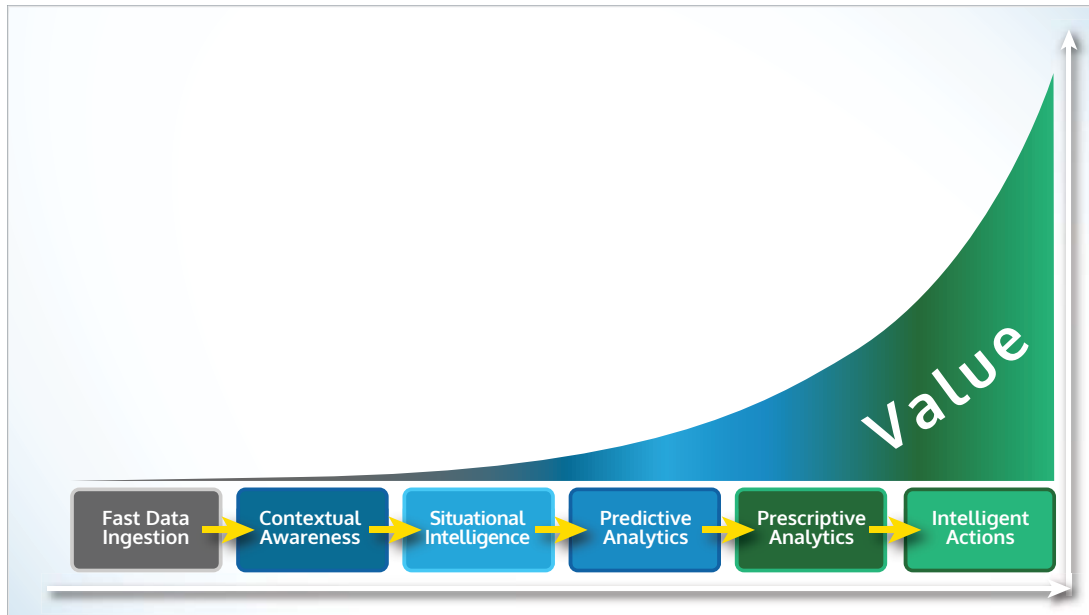
**SOLUTION:** Stepping through the analytics value chain used in Vitria's IoT Platform provides a methodology to predict maintenance requirements and execute the actions necessary to address issues before they cause patient problems.



- 1) The first step is to ingest all the critical data at speed and volume to ensure all the necessary context to assess equipment health.
- 2) Next is to correlate that data with context on maintenance history of the equipment – mean time between failure and other critical metrics at a population level.
- 3) Situational intelligence is critical to the value chain and understanding the real-time status of equipment – its maintenance schedule, error trends, and other behavior is the next link in the chain.
- 4) With the first three steps of the value chain in place, maintenance professionals can now predict possible equipment failures or performance issues.
- 5) Prescriptive analytics focused on identifying the next best action to address the potentially serious issues in the equipment is next – usually a technician is auto-dispatched with precise instructions for fixing the issue in the equipment.
- 6) The prescriptive analytics lead to the final step of an intelligent action of fixing or tuning the machine – leading to reduced downtime, improved patient outcomes and reduced technician visits and costs.

## 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.