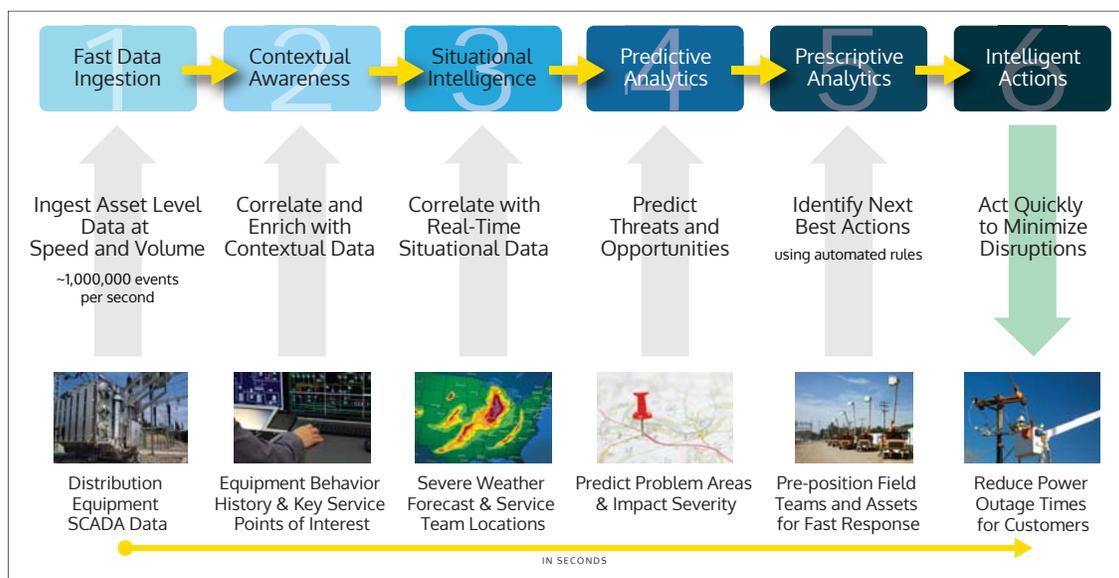


# Vitria Analytics Value Chain for Storm Preparedness

**CHALLENGE:** Being prepared for the wide array of urgent issues and problems that can arise during severe weather and other emergencies is not easy for utilities. Their widely dispersed equipment and infrastructure creates many points of vulnerability.

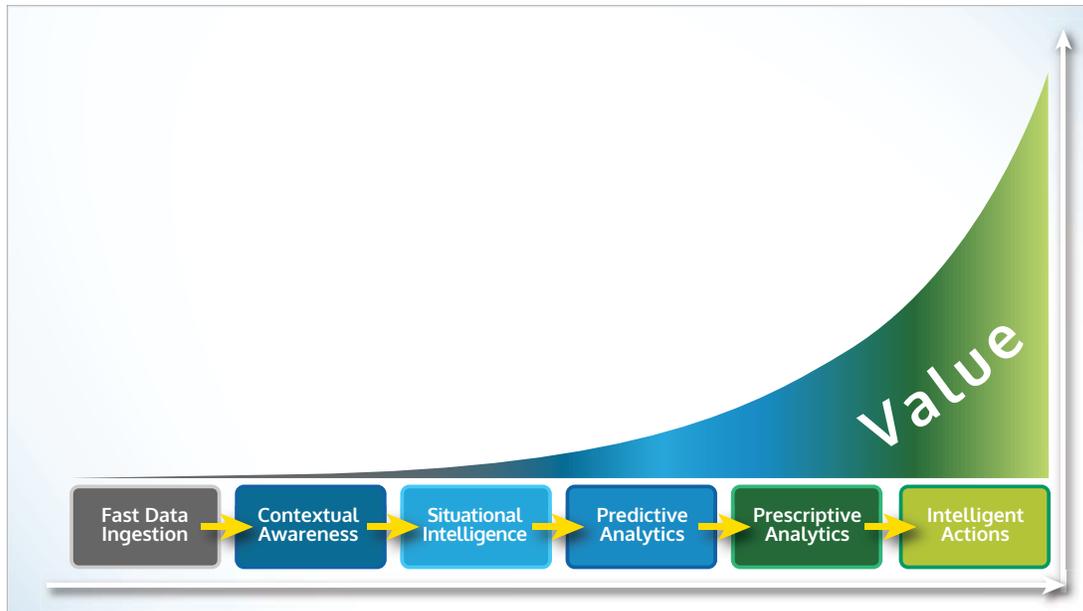
**SOLUTION:** Vitria's IoT Analytics Platform enables utilities to understand the potential impact of emergency events in real-time, predict possible outcomes, and act in real-time to mitigate problems and avoid outages before they cause major disruptions.



- 1) Ingesting data at speed and volume from monitoring devices at electrical transformer sites and transmission status on a typical grid 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 maintenance history, equipment performance during previous emergencies, resilience experience at specific locations 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 dynamic weather forecasts and transformer and equipment performance and status during emergency events.
- 4) A critical step is to anticipate equipment breakdowns and damage using predictive analytics that are based on machine learning. For emergencies, this usually means identifying potential failures or malfunctions in key generation or transmission assets.
- 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 continuous service.

## 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.