Detecting the Cause of Operational Issues Faster with VIA's Advanced Anomaly Detection Solution

Capture the Opportunities

To improve operational performance and the quality of service, you need to identify the root cause of underlying issues as quickly as possible and then fix them. How much time does your organization spend fixing symptoms and not the problem? How often is the true cause located outside the visibility and control of the team addressing the problem? If the cause is not addressed, issues will resurface and chasing the symptoms will continue to bleed company resources and lead to:

- Ineffective staff time,
- Higher service incident rates; and
- Declines in customer satisfaction.

Identifying the root case quickly delivers significant bottom line savings and improves the overall service quality delivered to your customers. Areas of improvement include:

- Faster fix rates.
- Reduction in service incidents.
- Higher staff productivity.
- Avoiding service or production disruption.
- Improved net promoter scores.

VIA's Advanced Anomaly Detection Solution

VIA's Advanced Anomaly Detection Solution allows organizations to detect anomalous behavior and find root cause within a complex set of assets or processes across the network, production line or within process flows with speed and agility. VIA uses statistical methods and AI technologies, to learn asset behaviors, monitor their events in real time, and raise meaningful anomalies that operational teams leverage.
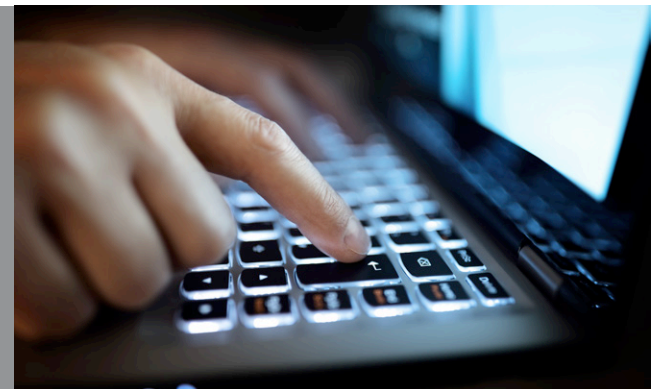
Challenge

Chasing and fixing symptoms and analyzing false positives is absorbing too much time and resources while the underlying root cause of more complex problems remains undiscovered for too long impacting performance and service quality. Legacy operational systems are not equipped with advanced analytics or able to provide enough context to adequately support the identification of root cause of issues.

Solution

Implement VIA Digital Operations Advanced Anomaly Detection and Real-Time Monitoring solutions to detect anomalous behavior and find root cause within a complex set of assets or processes across the network or production line or within process flows with speed and agility.

Benefits

Advanced Anomaly Detection combined with Real-time Process Monitoring enables:

- Reduction in avoidable service incidents by addressing the issues proactively.
- Improvement in staff productivity by eliminating false positives and raising accurate operational alarms.
- Reduction in the meantime to repair and resolve.
- Improvement in overall customer satisfaction and net promoter scores.

Once anomalies are discovered correlations of anomalies across time, hierarchy, events, and service layers determine probable root cause. Baselines at a per dimension or per attribute basis provide for granular detection of anomalies and trending.

Unlike other solutions, events are correlated based on both implicit or learned and explicit relationships. The severity of events and prioritization of actions can be determined based on event correlation with context, such as service or customer impact. The solution also supports streaming correlation of events in real time.
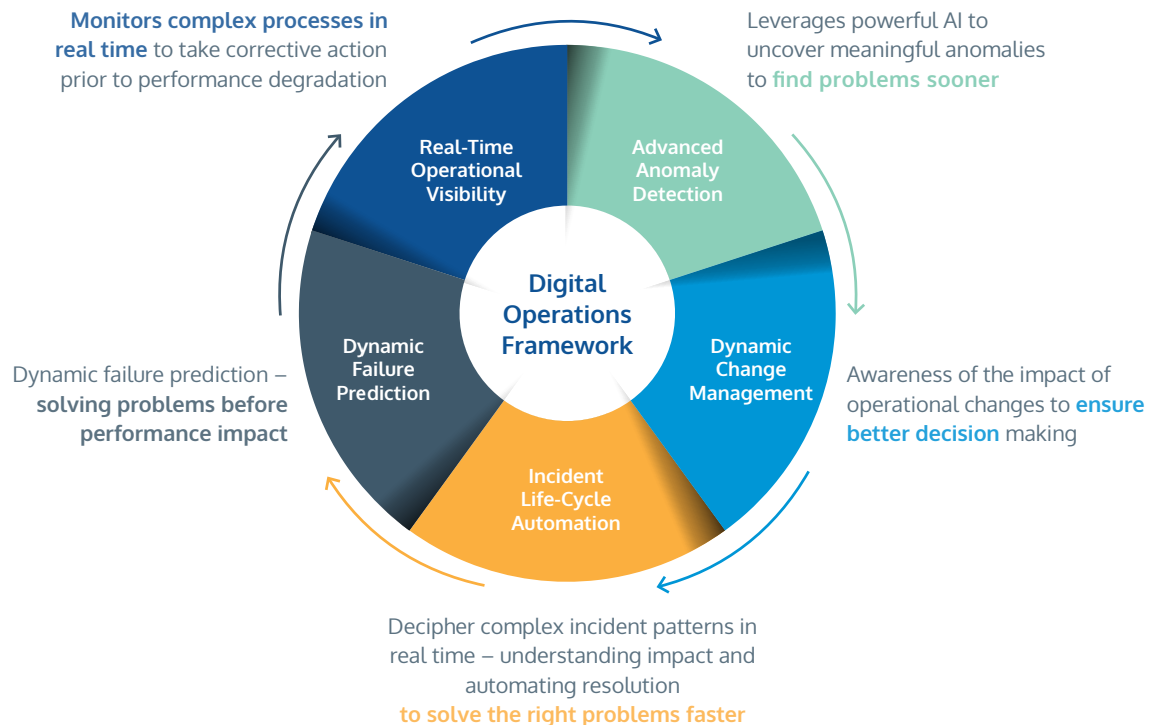
The VIA platform provides machine learning libraries for both supervised and unsupervised learning and utilizes explanatory models so users can better understand the results. Incidents are categorized by impacted 'layers' of the ecosystem such as service impacting and infrastructure.

	SOLUTION CAPABILITIES	USER BENEFITS
Acceleration of issue detection and root cause	Detects anomalies over monitored time-series to raise accurate operational alarms. Maps anomalies by topic in the geo-space (e.g. network elements, plans, machines on a shop floor).	Reduces time to identification of probable causes. Enables discovery of nuanced issues that are normally missed by threshold-based anomaly detection.
	Dimension analysis uses machine learning, the association of attributes-to-events across a given time-series to identify potentially impacted entities.	Users gain a better understanding of the areas requiring investigation and action. Narrows down probable causes quickly.
Improving staff productivity and efficiency	Intelligent alerting uses machine-learning. Detected anomalies are reanalyzed for both time-based and parent/child redundancy. The resulting correlated anomalies are grouped into a single alert which is continuously reanalyzed as new data is made available. VIA also correlates alarms from third party OSS systems and associates them with detected anomalies to reduce alarm and alert noise.	Dramatic reduction in false positive alerts, often by 80% or more. This improves staff productivity by focusing their attention in the right areas for further analysis or action.
	Integration with incident management systems, such as Remedy and Service Now, as well as other downstream systems like CRM, provisioning, billing, and contact management. This enables checking for existing incidents or alerts on the same population in order to avoid redundancy.	Eliminates multiple teams working on the same problem independently and in silos without the benefit of advanced analytics and context-based learnings.
Automation of root cause and prioritization of actions	Situational Intelligence enriches entity profiles with situational KPIs form third party OSS systems.	Improves and enables automation of root cause analysis.
	Predictive Analytics predicts the impact of detected anomalies and events.	Enables prioritization of actions to minimize operational impact.

Vitria's Digital Operations Framework

Advanced Anomaly Detection is part of Vitria's overarching solution framework. Vitria's approach to digital operations enables clients to realize business value quickly while enabling continuous improvements.

Vitria's Digital Operations Framework

Monitors complex processes in real time to take corrective action prior to performance degradation

Leverages powerful AI to uncover meaningful anomalies to **find problems sooner**

Real-Time Operational Visibility

Advanced Anomaly Detection

Digital Operations Framework

Dynamic Failure Prediction

Dynamic Change Management

Incident Life-Cycle Automation

Dynamic failure prediction – **solving problems before performance impact**

Awareness of the impact of operational changes to **ensure better decision** making

Decipher complex incident patterns in real time – understanding impact and automating resolution **to solve the right problems faster**

Realize The Benefits

Improving operational performance and the quality of service, mandates the identification of root cause of any underlying operational issues as quickly as possible for remediation actions to be affected. Our goal is to allow our clients to uncover issues and problems before they become customer service incidents. With VIA's Advanced Anomaly Detection Solution:

• Nuanced problems are identified rapidly;

• Root cause definition is accelerated; and,

• Staff productivity is improved.

Let's get started!
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VITRIA®

About Vitria Technology

Vitria VIA Digital Operations Platform empowers enterprise and industrial customers to analyze faster, act smarter, and achieve better outcomes in their IoT and business operations. The company has a history of success in streaming analytics, business process management, enterprise application integration, and operational intelligence.

Vitria is now a leading player in the rapidly growing digital operations and analytics market. Customers include Fortune 500 companies and enterprises across a wide range of industries, including finance, manufacturing, telecommunications, utilities, retail and more. For more information, visit www.vitria.com.