VANTIQ | Infosys
Innovate Faster. Operate Smarter. | Navigate your next

Application for Real-Time Safety Monitoring and Response

Why Vantiq

► **Situational Awareness:** Enable real-time monitoring of the environment to automatically locate issues and orchestrate appropriate actions

► **Distributed:** Ensure low latency (<10 milliseconds), and resiliency of data with an Edge and Cloud-Native platform

► **Flexible Integration:** Connect and correlate diverse data from numerous sources such as IoT sensors, cameras, PLC/SCADA systems, third-party assets, and more

► **Agile:** Rapidly develop applications in a matter of days or weeks and easily customize to adapt to evolving business needs

► **Scalable and Secure:** Utilize Event-Driven and federated application architecture to quickly scale applications across complex enterprise operations

To learn more, go to

www.infosys.com/industries/oil-and-gas.html

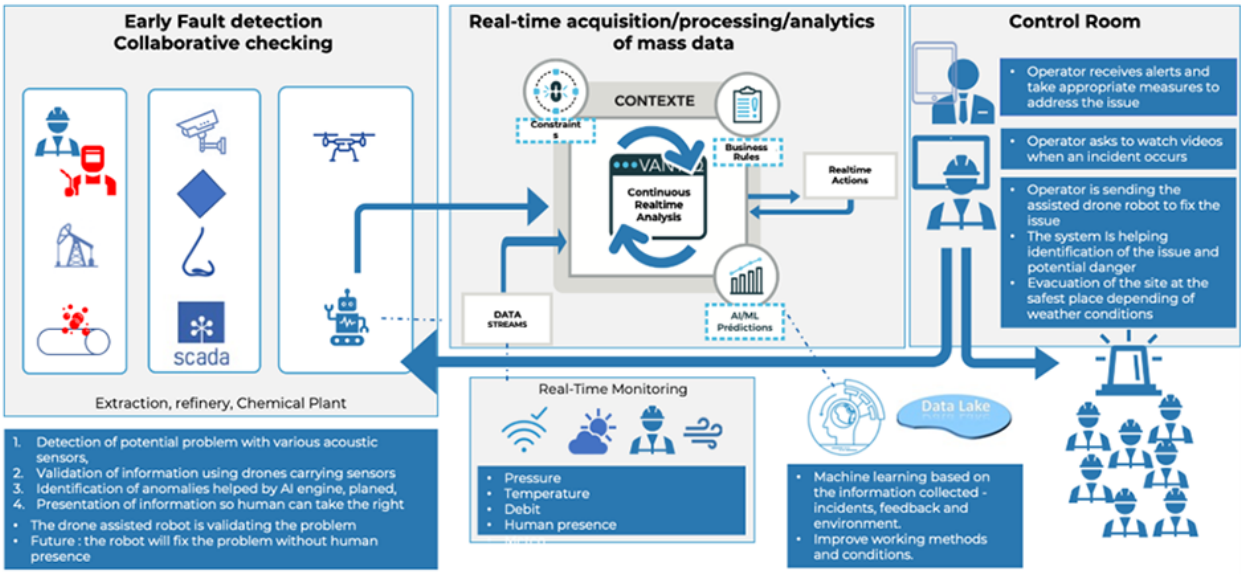
SAFETY REQUIRES REAL-TIME TECHNOLOGY

Reducing carbon emissions and ensuring safe operations are the two most important objectives of the Oil and Gas industry today. Oil and gas enterprises have to transform.

With Vantiq, businesses can rapidly create real-time Safety Monitoring and Response Applications with the ability to Sense, Analyze, and Act on numerous streams of data, providing Situational Awareness and an effective response in real time.

THE APPLICATION

Built on Vantiq's real-time platform, the application is aimed to detect threats, identify situations of interest, and orchestrate appropriate action. Vantiq monitors all infrastructure and coordinates alerts and notifications in real time to ensure that the appropriate response is taken as the situation evolves.



Oil & Gas enterprises can now build their application with the following characteristics:

Agile System Architecture

Growth and innovation are major factors that determine a business' survival. Vantiq uses a low-code development approach to abstract away thousands of lines of code. Not only does this vastly decrease costly development time, but it allows for the rapid iteration/evolution of applications in response to unforeseen events, which in the Oil & Gas industry can mean the difference between life and death.

In the past, making a minor change to an existing application or adding a new component could take weeks, if not more. Having to suspend operations or operate at reduced capacity not only hurts the bottom line, but puts workers' lives in danger. Vantiq's dynamic architecture enables continuous deployment and zero downtime of mission-critical applications. When changes or updates need to be made to one part of the application, the entire system does not need to be taken offline.

Digital Twin Technology

Having a complete picture of Oil & Gas operations is paramount to ensuring the safety of a workplace. By connecting Vantiq's streaming data analysis and real-time action with next-generation digital twin technology, Oil & Gas businesses are able to view all aspects of their operations in real time.

Instead of waiting for an accident to happen and responding after the fact, remote and/or on-site operators are immediately notified of a problem, such as a gas leak, with an exact location of the malfunctioning unit. The operator can then investigate the situation, order an evacuation taking into account wind direction and location of workers, and provide a suggested course of action to safely repair the unit.

This unlocks new digital operational intelligence to connect and run the real-world environment.

Real-Time Responses

When human lives or the environment are on the line, you don't have time to dig through a database to find the most recent diagnostic report on a malfunctioning pressure valve. By using real-time technology, data is streamed into the Vantiq platform, analyzed, and acted upon if necessary. By only bringing in humans to make mission-critical decisions when a problem is detected, operators can focus on preventing disasters instead of responding to them.

THE BENEFITS

Increased Operational Safety

Vantiq's real-time platform integrates many different technologies (GPS tracking of workers, thermal imagery, acoustic sensors, etc.) to paint a real-time picture of Oil and Gas operations. This allows Oil & Gas enterprises to recognize minor issues before they become major problems.

Decreased Risk of Catastrophic Failure

As past disasters in the Oil & Gas industry have shown, the damage caused extends much further than the cost of damaged infrastructure. The environmental fallout can have an impact for centuries to come and lives are almost always lost in these disasters. By moving to a real-time approach, the risk of a catastrophic event occurring is decreased and if such an event does occur, egress procedures are in place to ensure no human lives are lost.

This also has benefits to the bottom line, as fewer accidents and injuries mean less legal costs and infrastructure repair.

Increase Situational Awareness of Mission-Critical Systems

Most of the time, equipment doesn't go from working 100% to complete failure immediately. By using a wide array of smart sensors and streaming the data into Vantiq, operators are immediately alerted of deviations and anomalies and can choose the best course of action to prevent a major accident.

VANTIQ

Vantiq is an Agile, Full Lifecycle Development Platform for creating smart applications that can Sense, Analyze, and Act in real time to monitor and operate things in the real world. With Vantiq, you can quickly build a dynamic application for real-time safety monitoring and response to fit your specific requirements, connect thousands of sensors and streams of data, add logic, develop, test, and deploy anywhere (on Edge or Cloud), at the push of a button.