Spectrum **AI**
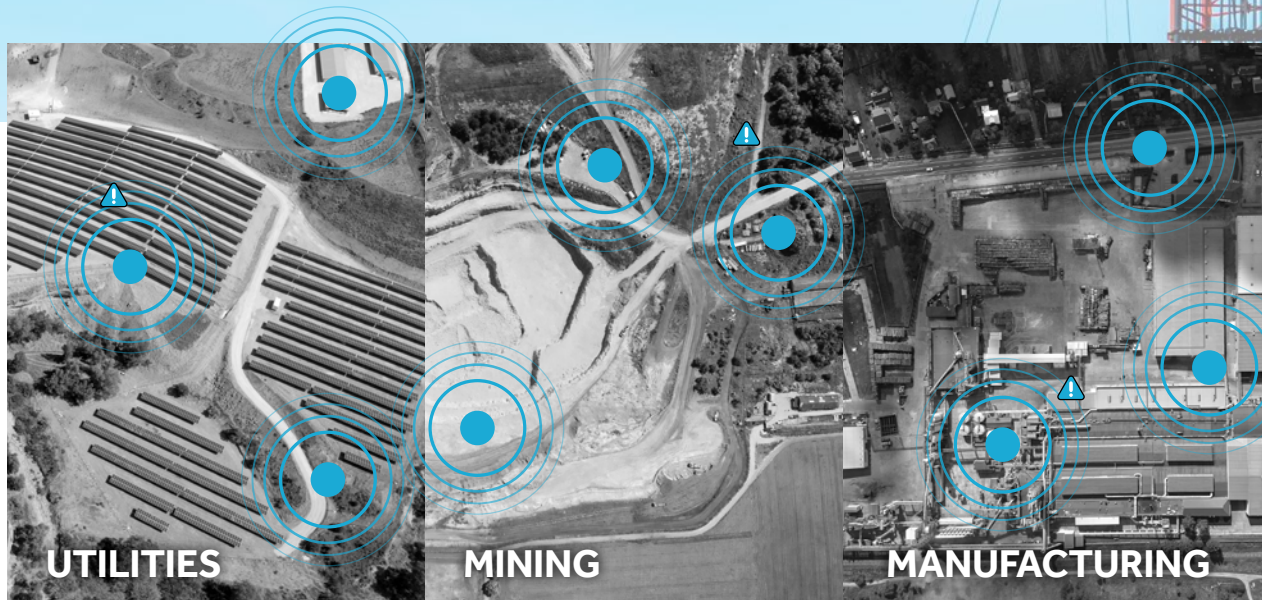## Monitoring Solution

Smart Private-Network Monitoring that Detects Issues and Provides Alerts that Help Eliminate Communications Disruptions and Costly Downtime

Utilities, mining and manufacturing operations can now protect network connectivity across physical and digital infrastructure by monitoring and analyzing wireless spectrum and identifying interference and other system performance issues before they lead to unnecessary downtime

UTILITIES

MINING

MANUFACTURING

An integrated on-premise solution from

WCS SOUTH AMERICA
A Wesley Clover International Affiliate

DEEPLANDING

PROBLEM

A need is growing within industry to increase the security and up-time of increasingly vital private networks through the monitoring of wireless spectrum and the generation of actionable intelligence to help ensure their uninterrupted performance

Intelligent spectrum analysis helps avoid the high costs of network downtime resulting from performance issues and interference in existing and emerging communications networks.
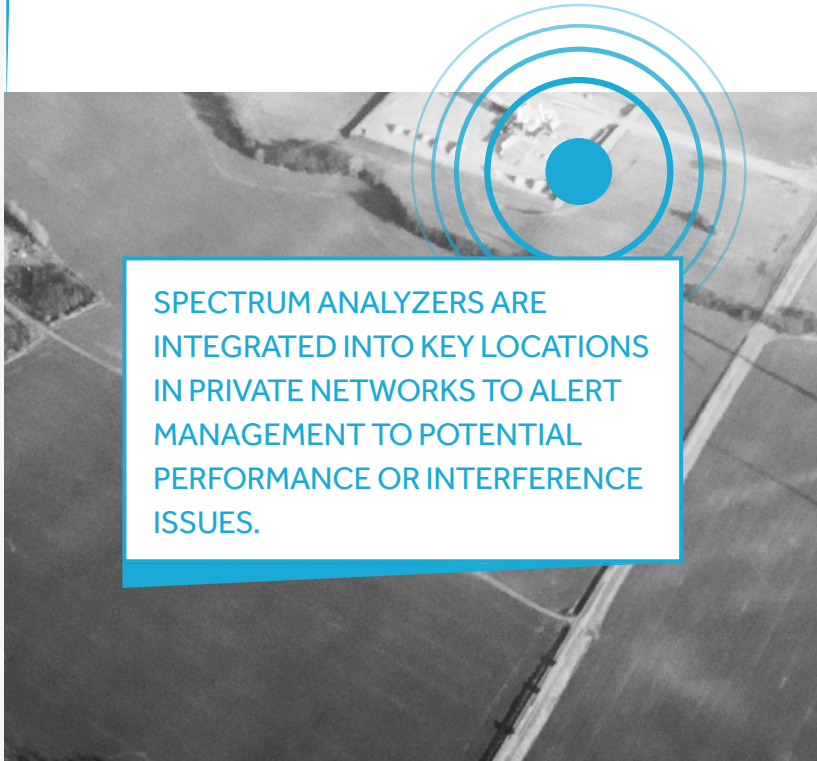
Identifying issues such as a rogue interference device within a highly congested spectrum, for example, would typically require several hours of investigation by an experienced engineer. Spectrum AI fully automates that process.

Ensuring private networks continue to deliver advanced, disruption-free connectivity can not be overstated in environments where business-critical equipment and processes are being monitored and managed remotely. 24/7 availability, rapid data exchange, real-time situation awareness are all essential to fluid business operation. Any type of interference or disruption in network connectivity and signal quality, be it accidental or perhaps intentional, can affect telemetry and operational data and pose sometimes significant risk to equipment, employee safety, facilities and bottom-line productivity.
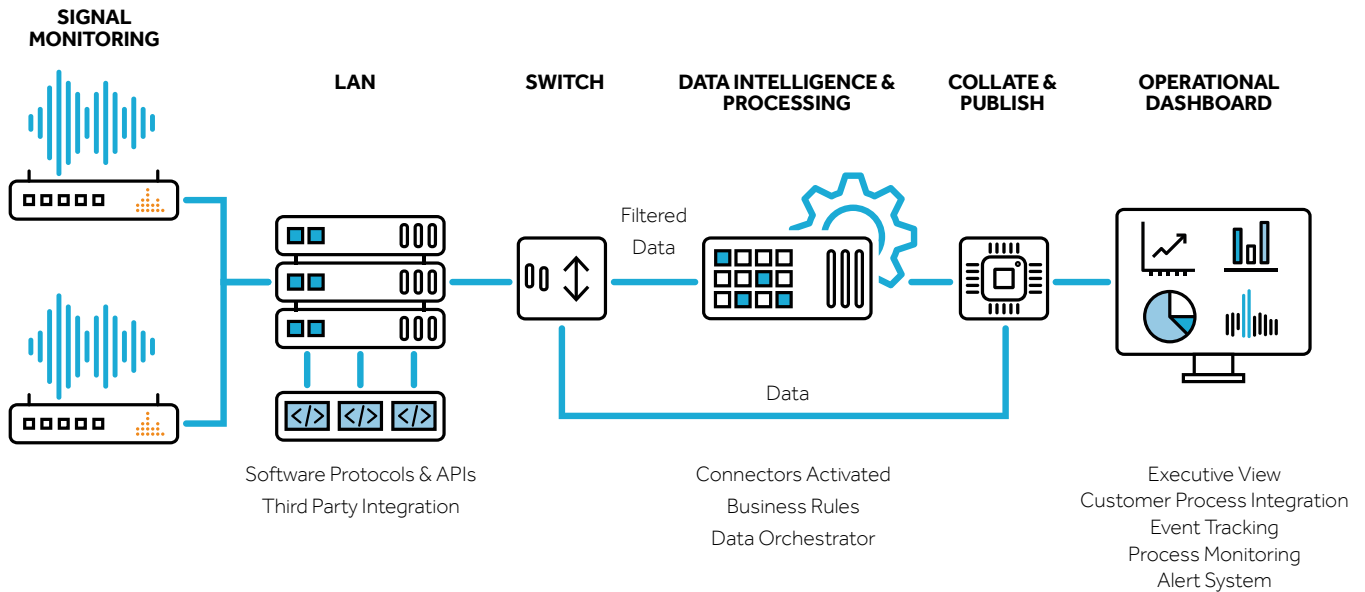
SOLUTION

The SpectrumAI Monitoring Solution continuously scans spectrum usage within a private area, analyzing and identifying signal interference or degradation and alerting users to help them take corrective action and reduce any impacts.

Constant advances in automation provide manufacturing, logistics, utilities, mining and other sectors with the ability to increase operating efficiencies, productivity, competitiveness and profitability. In these environments, the ever-increasing capacity, speed and reliability of wireless (RF) communications - particularly from WiFi, Bluetooth and new 5G services - represent benefits that are hard to ignore in terms of controlling and maintaining equipment, processes and facilities remotely, autonomously, and efficiently, over private networks.

SPECTRUM ANALYZERS ARE INTEGRATED INTO KEY LOCATIONS IN PRIVATE NETWORKS TO ALERT MANAGEMENT TO POTENTIAL PERFORMANCE OR INTERFERENCE ISSUES.

Spectrum **AI**
Monitoring Solution

FEATURES & BENEFITS

SIGNAL MONITORING

LAN

SWITCH

DATA INTELLIGENCE & PROCESSING

COLLATE & PUBLISH

OPERATIONAL DASHBOARD

Filtered Data

Data

Software Protocols & APIs
Third Party Integration

Connectors Activated
Business Rules
Data Orchestrator

Executive View
Customer Process Integration
Event Tracking
Process Monitoring
Alert System

- The Spectrum AI Monitoring Solution uses non-invasive signal analysis nodes with a standards-based API to integrate easily into any private network and equipment/data device environment.

- Signal analysis data is captured in real time for instant awareness, and based on client needs, can be stored on-premises or in a secure, vendor-agnostic cloud.

- Intelligent machine-learning technology and predictive/proactive data algorithms enable the platform to understand client business rules and processes as they operate across the network. This allows the system to then detect, track and generate alerts on signal activities that fall outside these norms.

- All spectrum activity is presented to the user graphically in an access-controlled Operational Intelligence Dashboard that offers dynamic alerting and extensive reporting features.
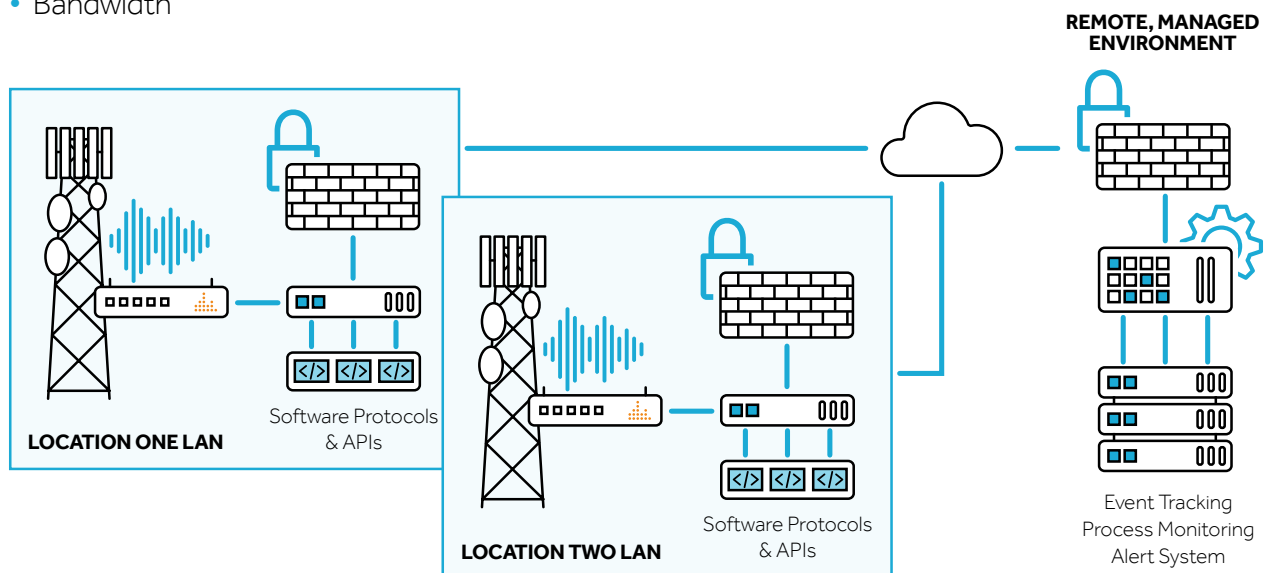
Across two separate locations, the Spectrum AI solution is generating real-time data on network connectivity essentials including:

- Carrier Frequencies
- Frequency Deviation
- Normal Operating Amplitudes
- Interference Frequencies
- Bandwidth

This intelligent monitoring leads to actionable insights and returns functional reports that track active and resolved alerts, predictive monitoring for issues and expected behaviour analysis

REMOTE, MANAGED ENVIRONMENT

LOCATION ONE LAN

Software Protocols & APIs

LOCATION TWO LAN

Software Protocols & APIs

Event Tracking
Process Monitoring
Alert System

"The Spectrum AI solution is now providing us with network performance and operational data we did not know we could obtain and did not know how critical it would be to our ongoing productivity."
Global Tier One Utility Provider

Learn how Spectrum AI can help eliminate operational downtime and losses in your sites and facilities.

Visit our website to view a demonstration or contact us for more information.

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