



## Quick, Intelligent Security Built for the Extremes

Imagine patrolling oil pipelines, in the heart of the rural Midwest, spanning thousands of miles across remote terrain and wilderness.

Remote but not secure, as vandalism and trespassing is a frequent recurrence, putting employees, equipment and the environment at risk. Security guards, running ragged in brutal weather, drive hours back and forth, impossibly attempting to monitor substations 24/7. This unrelenting schedule is just part of the territory for security teams at Oil & Gas companies, responding to every possible security breach and false alarm with limited situational awareness.

Local systems integrator Kris Greiner, Vice President of [Solbreez Security Solutions](#), was keenly aware of this reality. “Our feeling was that security is the biggest issue moving forward in today’s world.”

**Industry:**  
Oil & Gas

**Application:**  
Real-time video surveillance with analytics

**Products:**  
V5 PSU-Analytics

### Challenge: Escalating Violence, Limited Visibility

Executives at the Midtrans Company\* (name masked for privacy) confirmed that Greiner’s assessment was right on target. Today’s Oil & Gas companies executives juggle more than just securing their assets from brutal weather conditions or accidents. Vandalism, terrorism and oil spills are very real threats; any sort of breach that damages equipment can lead to destruction of the surrounding environment, shutdown of pipeline activities, loss of revenue and even loss of life. Monitoring to prevent these tragedies is time and labor-intensive; it’s also exceptionally difficult to be thorough when human physicality is stretched thin.

Midtrans Company, in particular, was faced with very real, escalating vandalism, and executives were worried about the environmental impact of equipment damage and danger to employees. When he heard about their dilemma, Greiner recalled thinking, “I can’t believe they weren’t able to secure this critical equipment, so I reached out to them.”

In the case of Midtrans, their business perimeter included harsh wilderness environments. Midtrans had hundreds of intermittent substations in hard-to-access locations; wiring built-in security would be a daunting, expensive and slow project, and the company risked disaster for every day it went without viable, real-time situational awareness. Securing the entire length of the pipeline and remote buildings along the way required 24/7 security monitoring, an expensive solution relying on human surveillance. Extreme weather conditions made conventional security – manned patrol – tricky to consistently implement.

Employee safety was a constant, urgent concern. Technicians could be dispatched on a two-hour drive to the middle of nowhere, not knowing if they’d find an annoying loose door and a mischievous, masked raccoon, or a masked vandal with violence in mind. That risk didn’t sit well with company executives.

Midtrans desperately needed real-time information in the event of power or video-feed interruptions, plus the ability to capture on-the-spot data to improve future deterrence systems. Before Greiner entered the scene, the company had installed one custom-built, on-site, solar-powered surveillance system, hoping it might do the trick and eventually be deployed system-wide.

But when hail took out the solar panels, it removed all ability to monitor the remote locale for damage or failure. Instead of being able to eliminate the \$200,000 per day cost required for their vulnerable manned security, they ended up with another problem on their hands. They needed an intelligent solution – and fast.

### **Solution: Don’t Work Harder, Work Smarter and Faster**

Greiner suggested a better idea. He had discovered V5 Systems, an innovative Silicon Valley technology company that anticipated extreme weather-related incidents by developing hail-proof (and even bullet-resistant) solar. V5 Systems had designed a hardened, industrial-grade casing around its state-of-the-art security system so customers could reliably protect their outdoor assets. Midtrans was intrigued.

“I saw the ability to sell value as opposed to selling the cheapest camera solution on the market,” he recounted. If vandals could thwart the effectiveness of simple infrared cameras, Greiner knew a more sophisticated solution was required.

Initially, Greiner was met with skepticism, as the company’s experiences led its executives to believe that they couldn’t stop a motivated vandal or terrorist. He concurred but was convinced they could minimize damage via fast and accurate notifications during the security breach, not hours later.

With their outdoor monitoring conditions in mind, Greiner presented the V5 Portable Security Unit (V5 PSU) as a comprehensive solution. The company executives were immediately captivated by the proactive capabilities of its self-powered video surveillance coupled with intelligent analytics, all free from the electrical grid. They especially appreciated the system’s ability to severely reduce the time available for a trespasser to inflict property damage, because of the real-time, Artificial Intelligence-driven alerts that the units generated.

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## Results: Control the Narrative

Typically, traditional wired surveillance could take years to deploy over hundreds of remote sites. Because each V5 PSU takes only 30 minutes to get up and running, Midtrans was able to blanket V5 Systems' lightweight, 25-pound surveillance units over hundreds of substations within three months. In areas where Midtrans did not have access to fixed power, the units were completely off-grid. Where power was easily available, the units were connected directly to AC power to enable redundancy with the battery system; V5 Systems' surveillance could therefore operate independently of substation power, providing insight even when power was cut.

Each unit is connected via cellular communications – allowing for real-time video streaming from practically anywhere, on any smart device. Most critically, with its onboard analytics, automatic alerts are generated within seconds if a human or vehicle enters a defined zone, allowing the oil company to address crime as it occurs.

After initial skepticism, Greiner's novel approach was well-received, post-deployment. "What Midtrans employees quickly found out, is that it's making their jobs easier. Now if there's a security concern, they can just get on their app and say, my site's intact."

Midtrans slashed nearly \$70 million annually, almost 96% of its annual security costs within three months from the signed contract with Solbreez. Instead of the liability of technicians susceptible to sleep, boredom and danger from both natural elements and criminal attack, they have a reliable solution they can count on to protect their assets.

Beyond security, this company's operations and engineering directors rely on the V5 PSUs to monitor damage to their pipeline infrastructure before it potentially becomes an environmental or public relations disaster. With distributed intelligence and solar-powered security solutions installed where they need it, not where it's most accessible, they can centrally manage and respond to accidents immediately. As a result, the company avoids expensive pipeline leak containment and cleanup costs that often cripple the industry due to even a few hours delay in reporting a problem.

Midtrans' willingness to think outside traditional security paradigms was a winning solution. They were able to rapidly protect its employees and assets while dramatically driving down costs.

"There hasn't been any unaddressed trespassing since we took over," Greiner reported.

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# Summary

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## **Organization:**

An oil company recently expanded its operations into distant locations and was now the target of motivated vandals. It needed to protect the perimeter of even its non-hazardous facilities.

## **Challenge:**

To reduce spending \$200,000 a day for vulnerable manned security spread across far-flung, inhospitable terrain, yielding unsatisfactory results.

## **Solution:**

Deployment of the V5 Portable Security Unit: a self-contained, solar-powered surveillance-and-detection platform that can be installed in under 30 minutes per unit at even the most remote and extreme locations.

## **Results:**

The oil company gained real-time visibility over hundreds of miles of remote pipeline, in under 3 months – while cutting the costs of maintaining onsite security by nearly \$70 million annually. Instances of vandalism have since dropped off to zero.