MCA

Case Study | Logan Aluminum

Increasing Manufacturing Safety and Efficiency with Orchestrate Workflow Automation and Unified Voice, Data, and Video Communications from Motorola Solutions

OVERVIEW

Advancing Industrial Manufacturing Safety, Security, and Efficiency Through an Integrated Technology Ecosystem

Aluminum manufacturing in the United States is a crucial sector that supports a wide range of industries, from automotive and aerospace to construction and consumer goods.

As a lightweight, recyclable, and highly versatile material, aluminum plays a pivotal role in advancing sustainable manufacturing and innovation across the country.

Located in southwestern Kentucky, Logan Aluminum, an industrial giant, is at the forefront of aluminum manufacturing, producing nearly half of the United States' aluminum sheet products.

As the largest employer in its county, the company boasts a diverse

workforce of about 1,500 staff across seven operational units, situated within a sprawling 1,110-acre campus.

With such vast operations, the facility encounters unique security challenges, including the management of hazardous machinery and chemicals.

The extensive flow of contractors, employees, and deliveries adds layers of complexity to their security needs.

Prioritizing the safety of their workforce and the integrity of their operations, the plant invests heavily in maintaining robust safety protocols and security systems to mitigate any potential risks effectively.

LOGAN ALUMINUM

Improving communications for over 1,500 employees across an 1,100 acre campus

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Solving for Safer with Motorola Solutions Unified Ecosystems

WAVE PTX Broadband Push-to-Talk

Orchestrate Workflow Automation

Capacity Max Private Radio Systems

MOTOTRBO™ Ion, XPR 75500 & XPR 5550E Radios

Avigilon Cameras w/AI and LPR

Private Wireless Networking

| ION Radio | XPR 5550e | XPR 7550e | Cameras | Wave PTT | Orchestrate | Private LTE |

> "When we had questions about the solutions, their team had answers. They offered us specifics and they helped us understand how the products would function specifically in our environment. That gave us a great deal of confidence in Motorola Solutions. They've been a true partner to us."
> — Joseph Jenkins *Loss Prevention Leader*

CHALLENGE

Overcoming Obstacles in Communication and Security Systems

Inadequate Radio Coverage: Logan Aluminum's existing radio system was meant to facilitate seamless communication across its vast primary 30-acre plant, which features challenging conditions like a metal roof, noisy equipment, and multiple concrete tunnels and pits.

Despite the addition of multiple radio signal repeaters to enhance coverage, the system struggled to maintain reliability, making it difficult to communicate in remote parts of the campus or in areas with signal interference.

Shane Miller, the system administrator for plant communications, noted, "*There were always issues in terms of network coverage, so we had to install additional repeaters to fill the gaps. Even with those extra repeaters, we were never able to fully cover everything. There was someone in my office at least once a week complaining about the radios.*"

Outdated Video Surveillance: The extensive campus of Logan Aluminum required vigilant monitoring of deliveries, visitors, contractors, and employees.

"My team is in the business of managing who comes in and out of the plant each day," said Joe Jenkins, head of loss prevention.

Despite the critical role of surveillance, the existing video system's requirement for hardwiring limited camera placement, leading to significant blind spots.

This forced security personnel to conduct manual patrols, a resource-intensive approach. Furthermore, the system's poor image quality and cumbersome footage review process hindered efficient incident analysis, bogging down the security team with administrative tasks and preventing proactive monitoring.

Fragmented Security Technologies: Logan Aluminum's security setup included a variety of technologies such as radios, cameras, access control systems, and sensors. The company aimed to integrate these into a cohesive system to enhance functionality and streamline operations.

Joe Jenkins explained the potential benefits: *"By marrying some of these systems together we can get entirely new functionality, like marking a zone and having the system automatically send an alert to a radio if someone enters that zone. That keeps someone from having to watch cameras all the time, the camera does it on its own."*

Recognizing the need for a scalable and adaptable security solution, the company sought an integrated system that could evolve with their needs. *"We needed something that would last and that we could grow with,"* Joe added. *"You have to build the foundation right, so we decided from the start an integrated system is the path we were going to go on."*

SOLUTION

The Head of Loss Prevention, the Communications System Administrator, and their teams unanimously recognized the necessity for a comprehensive, modern technology ecosystem that could significantly enhance safety, security, and operational efficiency across the facility.

To find the ideal solution that aligned with the organization's immediate needs while providing flexibility for future growth, they undertook a detailed evaluation of various technologies. **The chosen solution had to effectively address several critical challenges:**

- Seamless integration of diverse tools to effectively handle complex security and safety issues.
- Advanced video surveillance systems capable of providing enhanced visibility and operational efficiency.
- Reliable, extensive radio coverage to ensure uninterrupted communication throughout the expansive campus.

> *"Having PLTE and the Avigilon cameras tied to our radios is a big thing. For instance, now our camera system provides automatic notifications on our radios when anyone comes to the admin building."*
>
> Joseph Jenkins
> *Loss Prevention Leader*

After thorough consideration, the decision was made to adopt a comprehensive technology ecosystem from Motorola Solutions. **This system includes a suite of crucial components:**

- WAVE PTX Broadband Push-to-Talk
- Orchestrate Workflow Automation
- MOTOTRBO™ Capacity Max
- MOTOTRBO™ XPR 7550E, XPR 5550E, and Ion Radios
- Avigilon Cameras equipped with AI and License Plate Recognition
- Private Broadband (PLTE)

The Communications Systems Administrator voiced his satisfaction with the decision, stating, *"Motorola Solutions knows their stuff, and they have a phenomenal product. That's really what it came down to for us."* This integrated approach promises to resolve the facility's pressing challenges while laying the groundwork for a scalable future.

BENEFITS

Seamless Radio Coverage and Streamlined Troubleshooting

Logan Aluminum now enjoys clear, reliable radio coverage throughout its entire campus, thanks to the Motorola Solutions technology ecosystem. The comprehensive upgrade to the radio system has eliminated the need for multiple repeaters, consolidating all equipment in one central location for easier maintenance. *"Instead of having repeaters across campus and in buildings, we were able to condense everything together in one administration building,"* Shane noted. *"Now, if there's an issue with the system, there's one place to go to troubleshoot instead of having to travel across the campus to identify and fix the problem."* This consolidation has significantly saved time, allowing staff to focus on more productive efforts.

Additionally, the integration of WAVE PTX has extended push-to-talk functionalities, connecting radio users on campus with colleagues using smartphones, tablets, and computers across the country. This upgrade has proven invaluable, especially during times of supply chain disruptions. *"Availability is critical, especially these days,"* Shane added. "*Now, when I reach out to someone about an issue, concern, or just a quick question, they speak to me right away."*

Enhanced Surveillance with Advanced Video Analytics

The installation of Avigilon Cameras equipped with advanced video analytics has transformed security monitoring at Logan Aluminum. The cameras, supported by Private Broadband, can be deployed virtually anywhere on the campus without the constraints of hardwiring.

Joe Jenkins highlighted the immediate benefits: *"We put cameras on roads where we couldn't before. One of the most common problems we experience at the plant are contractors and truckers speeding on our access roads. With our Avigilon Cameras, we can teach them our routines – we can tell them what to look for and the system applies that intelligence to future searches."*

The new system not only captures high-quality images but also triggers automatic alerts for specific incidents, such as speeding or recognized hot-listed license plates. This capability has drastically reduced the time needed for footage review. *"Searching through footage to find an event used to take eight hours. Now I can find what I need in just 10 minutes,"* Joe explained.

A Unified, Scalable Security Ecosystem

The fully integrated technology ecosystem has redefined how Logan Aluminum approaches plant security and productivity. The combination of the Private Broadband network and MOTOTRBO™ Capacity Max system lays a robust connectivity foundation. The Orchestrate platform further enhances this by automating workflows across the video, radio, and other technological components, enabling comprehensive communication and monitoring.

This interconnected system not only improves security but also optimizes operations through strategic data use. *"Before, we had signs that flashed when a vehicle's speed limit was over 30 MPH,"* Shane remarked. *"Now, we're able to obtain traffic counts and better understand when our heaviest traffic times occur so that we can send our security team to do their rounds on the roads and in the lots during those times to watch for speeding. We're able to plan our operations better thanks to that data."*

Looking to the future, Shane is optimistic about the possibilities: "*We're just scratching the surface with this. The connectivity between our radios and cameras and other equipment is huge for us."*

"The clarity and coverage area is unreal," said Miller. "People used to come in every week to my office with problems, then we rolled this out and now there will be silence for weeks at a time. That means that there's not many issues anywhere."

Safe Manufacturing

By embracing a unified technology ecosystem, Logan Aluminum has significantly enhanced its operational efficiency and reinforced its status as a leader in safety and technological innovation. This comprehensive ecosystem allows the company to fully utilize advanced video data analytics, improving productivity and addressing critical safety and efficiency challenges.

With robust solutions ranging from dependable radio connectivity across the entire campus to private broadband that supports a wide array of devices, Logan Aluminum is at the forefront of modern industrial operations. The addition of cutting-edge video analytics and actionable insights from integrated data sets the stage for future advancements. This dynamic infrastructure not only delivers substantial immediate benefits but is also designed to grow and adapt seamlessly with Logan Aluminum's evolving needs and the rapid pace of technological progress.

A Proud Partner Motorola Partner

While we did not deploy the solution for Logan Aluminum, as a proud Platinum Partner of Motorola Solutions, we at MCA are uniquely equipped to assist similar manufacturing facilities. Our expertise and long-standing partnership with Motorola Solutions enable us to offer a comprehensive range of advanced technologies tailored to meet the specific needs of the industrial sector. Whether enhancing communication, security, or operational efficiency, we are committed to delivering cutting-edge solutions that drive success.

MCA | Your trusted advisor for a safe, secure, and efficient workplace.

"Having PLTE and the Avigilon cameras tied to our radios is a big thing. For instance, now our camera system provides automatic notifications on our radios when anyone comes to the admin building...As long as this transformative technology is there, we're going to use it. Our old system was nothing but a radio system. This is so much more." said Joe.

About MCA

MCA is one of the largest and most trusted technology integrators in the United States, offering world-class voice, data, and security solutions that enhance the quality, safety, and productivity of customers, operations, and lives.

More than 65,000 customers trust MCA to provide carefully researched solutions for a safe, secure, and more efficient workplace. As your trusted advisor, we reduce the time and effort needed to research, install, and maintain the right solutions to make your workplace better.

Our team of certified professionals across the United States delivers a full suite of reliable technologies with a service-first approach. The MCA advantage is our extensive service portfolio to support the solution life-cycle from start to finish.

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