



IMPROVING WORKER SAFETY WITH AZURE COMPUTER VISION

BACKGROUND

The use of technology to ensure safety measures at job sites has gained significant traction in recent years, leading Cramo, one of Europe's largest construction machinery and equipment rental services companies, to initiate discussions about the need for safer job sites with their clients. This pilot project was conducted at a job site where NCC partnered with Nexer Insight, where discussions were centered around improving safety measures for workers and reducing the incidence of unauthorized visitors to the site.

Throughout the pilot, Nexer Insight worked closely with Cramo to identify opportunities to enhance worker safety and minimize the risk of unauthorized visitors to the site. By leveraging cutting-edge Azure Computer Vision technology, Cramo, and Nexer Insight developed innovative solutions that ensured workers kept their safety gear on, ultimately creating a safer working environment.

AT A GLANCE

Company: Boels-Cramo Group

Industry: Equipment Rentals

Employees: 5,001+

Objectives:

- . To enhance worker safety and minimize the risk of unauthorized visitors to job sites
- . To improve safety compliance through innovative approaches
- . To promote a safety culture and enable data-driven decision-making for managers using cutting-edge technology

Products:

- . Azure IoT Hub
- . Azure IoT Edge
- . Azure Machine Learning
- . Azure Stream Analytics

CHALLENGE

Cramo faced a challenge with workers' reluctance to wear safety gear, which was addressed through collaboration with Nexer Insight to develop an education and engagement strategy that significantly improved compliance. The initiative involved adapting the solution from an office to a rugged job site, which posed technical challenges such as low light and cold weather conditions and providing reliable connectivity in remote areas. This collaboration between technical experts and industry leaders highlights the potential to address complex challenges through innovative approaches, focusing on promoting worker safety and preventing accidents at construction job sites.

SOLUTION

To address technical challenges in enhancing worker safety at job sites, Nexer Insight implemented advanced networking technology and rugged hardware. This helped to overcome issues such as low light and cold weather conditions and provided reliable connectivity in remote areas.

In addition, Cramo implemented a camera system integrated into safety gates to ensure workers wore the correct safety gear. This system effectively enforced safety protocols and increased workers' awareness of the importance of safety. The collected data also helped to identify areas that required further training.



“ Our innovative AI testing method is revolutionizing workplace safety by providing real-time analysis of safety equipment adherence. We're thrilled to see its positive impact on creating safer workplaces and improving worker safety. It's exciting to think about the potential for this technology to be implemented on a larger scale, significantly impacting the entire industry.

- LINE BORGÖ, HEAD OF DIGITAL BUSINESS, CRAMO

BENEFITS

The camera system implemented by Cramo to improve worker safety yielded multiple advantages. It facilitated a shift in workers' attitudes towards safety by providing valuable insights into their behavior and reducing accidents and injuries at job sites. The system empowered job site managers to make data-based decisions to address specific safety concerns, further enhancing worker safety. Additionally, it fostered a sense of healthy competition among workers around safety, increasing their engagement in safety protocols. Overall, the camera system had several positive outcomes, including promoting worker safety, reducing accidents and injuries, enabling data-driven decision-making for managers, and instilling a safety culture through gamification and competition.

These benefits hold significant potential for broader deployment across other job sites to strengthen worker safety and promote a safety culture in the construction industry.

RESULTS

Cramo's implementation of the camera system yielded several positive outcomes. Workers' safety awareness improved, increasing compliance with safety gear requirements and fewer accidents and injuries. Customers also expressed confidence in Cramo's ability to deliver safe job sites. The pilot project's success led to its expansion to other sites, and edge computing protected workers' privacy. Moreover, the successful implementation created a digital demo area for customers. These outcomes have significant potential for replication at other job sites, promoting worker safety and a culture of safety in the construction industry.



“At Nexer Insight, we take pride in advancing technology in the industry. Our commitment to partnering with organizations to implement innovative solutions that drive success is unwavering. This case study comprehensively analyses our collaboration with Cramo and NCC. It underscores the potential of data analytics and advanced technologies to revolutionize the construction industry.”

- **David Österlindh, CEO, Nexer Insight.**



Find out how Nexer Insight can help your organisation:

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