



Ricardo Cueva Figueroa and Akshat Kant, from Avigilon Corporation's Continuous Improvement department discuss improvement ideas.

# New team leads to increased safety and boosted morale

By Sarah Ripplinger

When this manufacturer took a closer look at workplace ergonomics, it led to positive changes.

When Avigilon Corporation, a global leader in AI-powered security cameras and video-management software, launched a continuous-improvement team to address critical production issues at their Richmond manufacturing facility, they were pleasantly surprised by the results.

After reviewing available data, conducting ergonomic assessments, and identifying priority areas, they began to overhaul some of their manufacturing processes, resulting in safer production, improved productivity, and even higher staff morale.

"It could get pretty chaotic before," recalls Kamal Sandhu, a production team supervisor on the company's evening shift.

Sandhu notes that the production-room floor could get cluttered with carts and boxes. Workers often needed to twist and turn to reach parts used in the assembly process. The number of parts and the distance team members had to travel between them reduced safety,

efficiency, and productivity, which resulted in unhappy staff.

"Ever since we've had the continuous-improvement team, we've had a lot of positive changes on the floor," says Sandhu.

Avigilon has seen impressive growth since it was founded in Vancouver in 2004. The company was acquired by Motorola Solutions in 2018, which prompted Avigilon's management to take a closer look at worker well-being and productivity. Their leadership took on the challenge of proactively improving their workplace and launched a continuous-improvement initiative.

"Our production numbers were great, but our production processes and plant layout left big room for improvement," notes Akshat Kant, leader of Avigilon's continuous improvement (CI) department in Richmond. "As part of a global company, to remain nimble and competitive we needed to get processes in place that would take us into the future. This includes establishing systems that work for employees and support company objectives."

## Getting data first-hand

One of the CI team's first undertakings was to conduct a meticulous analysis of the manufacturing environment at the company's Richmond facility, where more than 100 employees assemble security cameras and servers by hand. The analysis included a review of staffing, walking distances, and parts storage. The CI team collaborated with other departments, such as Production, Warehouse, and Manufacturing Engineering, to identify concerns and potential solutions. The team also spent time on the production floor, speaking with supervisors, team leads, and operators. This led to changes that supported ergonomic solutions.

"Our approach to making ergonomic improvements was based on data and on feedback from employees," says Kant. "Once we could see that people might not use some tools because of specific challenges, we could improve that."

While the team met twice weekly with management, their analysis and recommendations flowed from conversations with employees on the front lines.

"It was a grassroots approach because the production employees, in many ways, run the show," says Kant. "Once they gave us the green light that the analysis looked right, we started communicating upward."

"Senior management's commitment to implementing changes on the production floor was pivotal," he adds.

## The case for ergonomics

Workplace ergonomics is about understanding and enhancing the interplay between workers and their environment. Enhancements can include such things as improving lighting and eliminating the need to lift and move items.

Repetitive or awkward movements in the workplace put employees at risk of musculoskeletal injuries (MSIs) such as strains and sprains. In B.C., MSIs are the most common kind of work-related injury, which makes preventing them not only good for workers, but good for business, too.

"Using ergonomics to make even small workplace changes can immediately reduce risk factors for injuries, improve productivity, and increase employee engagement," notes Heather Kahle, a human factors specialist with WorkSafeBC.

Kahle was part of the WorkSafeBC team that answered Avigilon's request, in 2019, for an on-site visit to discuss ergonomic considerations.

"Avigilon really stands out," she says. "They have taken a proactive approach to overcome numerous challenges. Their cross-functional team objectively analyzed operations, and, most importantly, involved employees from the outset."

## Layout changes boosted efficiency

The CI team's analysis identified key areas for improvement. For instance, the production-floor layout was redesigned to improve the flow of employees between workstations. The redesign removed potential tripping hazards, reduced walking distances, eliminated opening of boxes, and minimized workers' need to bend, twist, and carry. The result? An efficient, optimized process.

Sit-stand desks were installed to enable workers to vary their posture while performing tasks. Avigilon built customized workstations with in-house resources, such as building racks using Creform pipe.

"We created a set of standards for workstations, for things like monitor height," says Kant. "Now, whenever we set up a new station, we refer to those standards."

Under the new protocols, bins for parts are replenished using plastic recycling bins instead of cardboard boxes that need to be opened. This has eliminated a lot of the dust from the air in the production room, as well as the need for employees to take frequent trips with carts to pick up parts for assembly. "With this simple change, we improved safety, ergonomics, quality, and efficiency," says Kant.

In the server assembly area, operators used to have to manually lift 72-pound servers onto the workbench. "It involved a lot of bending and twisting," says Eric Zhu, who leads the daytime shift team on the camera and server assembly side and has worked at Avigilon since 2012. "With the improved process and layout, we eliminated the need for operators to lift the servers manually, thereby reducing the risk of musculoskeletal injuries."

Adds supervisor Leslie Pacle, "We avoid a lot of walking and lifting now. It's a big improvement to health and safety."

Following the implementation of the continuous-improvement measures, Avigilon saw a 12 to 15

percent boost in efficiency, along with several hundred thousand dollars in savings. “We at Avigilon have created a win-win scenario,” asserts Kant.


“Because employees were engaged from ideation to implementation, the buy-in was huge. The transition was very smooth and the results have been great.”

Sandhu, who has worked for Avigilon since 2011, says

the happiness is palpable among employees. “It’s such a healthy and happy environment,” he beams. “We walk the talk. When we walk the floor to identify improvements, people can raise any issue and we’ll address it.”

“It is great to see how the company has grown and improved over the years.”

## Tips for employers

- Collect and analyze company information such as injury data, staffing levels, walking distances, and quality and production metrics.
- Identify areas where excessive reaching, grasping, lifting, or twisting may lead to injuries.
- Investigate and use tools such as Rapid Upper Limb Assessment (RULA), and WorkSafeBC’s Worksheets A and B, or lifting calculator to objectively understand the issues.
- Involve employees throughout the process, from brainstorming to implementation. Workers bring creative, valuable ideas and solutions — encouraging wider acceptance of changes.
- During workplace reviews, ask about equipment, material handling, walking distances, lighting, storage, and awkward, forceful, or repetitive movements to gather employee feedback about potential risks. 

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