



*Jim Fasano and Jaime  
Hewitt of VOA Canada*

## **Quality Window Helps Ensure Seatbelts Do Their Job**

When most people get into a car, putting on a seatbelt is almost a subconscious thought. We've trained our bodies to associate the action of buckling up with the act of sitting down. It's a practice that saves lives everyday, but when is the last time anybody ever stopped to examine a seatbelt?

The people at VOA Canada examine seatbelts everyday. Not only are they concerned about safety, but they are also concerned about quality. After all, the VOA group manufacture about 40% of the world's seatbelts, and they take the job of protecting people's lives very seriously.

VOA Canada operates a state-of-the-art manufacturing facility in Collingwood, Ontario. It is the only facility in North America dedicated to automotive seatbelt webbing. The plant has over 100 state-of-the-art seat belt looms, 3 high-speed single-end dye ranges, 1-multi end range and employs the latest design in finishing equipment. The plant has a Quality Assurance System registered to TS16949 standard and is ISO 14001 Certified.

As in any manufacturing plant, the ability to handle changing customer specifications and short runs while meeting cost and operational efficiency targets is always a challenge. Technology helps, but maintaining consistent quality (and thereby reducing waste) and reducing downtime are keys in achieving production goals.

The company has invested in tools to help them achieve their goals. For example, the dye ranges include roll tensioning to achieve tight tolerances on thickness and the single end dye ranges can

accommodate quick color changes and are linked directly to a proprietary video inspection system. Automatic cutting machines have a defect detection and removal system.

In addition to production tools, the plant also maintains an aggressive quality lab that performs tests on wide variety of product features, including colour, thickness, flammability, stiffness, elongation and tensile strength.

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In 2006, Quality Manager John Fasano and lab supervisor Jaime Hewitt adopted a goal to eliminate “muda” in the Collingwood plant. Muda is a Japanese term for activity that is wasteful and doesn't add value. Mr. Fasano wanted to eliminate over-processing, rework that led to scrap, and discarded product.

At the time, the plant's quality technicians were performing multiple equipment tests simultaneously. Testing results would be recorded by hand, and transferred to different applications.

Mr. Fasano was aware that the manual data collection naturally resulted in mistakes in collecting and transferring data. SPC data was not readily available when managers wanted it, and sometimes the data that was available did not offer clear indications of where problems might be. More importantly, the system did not offer any advance warnings when production was trending towards out of specification. Finally, the plant was drowning in paperwork and records retention was inefficient.

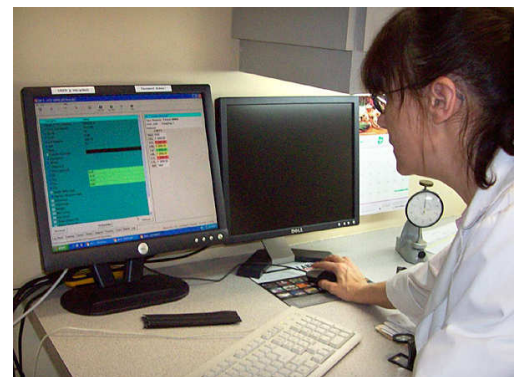
Mr. Fasano wanted to bring process performance closer to the lab technicians, but also involve managers in the day to day operations and give them the tools and data to help plan future process operations. VOA Canada has as a core value an enthusiasm for innovation, and Mr. Fasano knew there was a better solution to his problems.

Mr. Fasano downloaded **Quality Window** in November 2006 and installed it in the quality lab. He was impressed by the program's user-friendly interface, and its ability to visually display data in an intuitive manner.

“Once set up, Quality Window is a workhorse and gathers data with minimal maintenance’, said Jaime Hewett. “Both the electronic log sheet and the control chart deliver information visually that helps us determine performance at a glance.”

Gone were the piles of paperwork, and the lag time in sharing information. Mr. Fasano and his team were also impressed with Quality Window innovative charting screens.

“The various charts and statistical analysis tools allow us to effectively analyze data and identify the root cause of problems,” he added. “If processes are drifting out of control, the program raises an alarm. Rather than react to an entrenched problem, we can take steps to correct the source error before quality and production are compromised.”



A VOA lab technician reviews a data record using Quality Window

Quality Window allows VOA Canada staff to view their data in a variety of formats, from the raw log book numerical displays to colour intuitive charting. Users can compare data streams of the same variable over different time periods, or look for relationships between one or more variable data flows.. Histograms, scatterplots and pareto charts, are all available on the fly at the simple click of a mouse button, and can be imported into other programs such as Microsoft Word if needed for a report.

VOA Canada is now using Quality Window and the reports it can generate on both the plant floor and in regular manager meetings. It is helping the company to identify effective TPM measures that will ensure waste (muda) is minimized.

“Our plant is more efficient than ever before and we have fine-tuned our quality to the point where we believe we are world leaders”, says Mr. Fasano. “That makes our customers like General Motors, Volkswagen and Honda very happy.”

This innovative initiative by Mr. Fasano and Ms. Hewitt and the entire group at VOA Canada has now caught the attention of other sections of their parent company Autoliv. Autoliv prides itself on re-applying successes in its organization, so it may not be too long before Quality Window is installed at locations around the world.

*For similar case studies about how leading companies are using Quality Window, check out the Articles section of the Busitech.com website.*



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