

HOME | FACTORY | PLANT MAINTENANCE

Pepsi Bottler Shares Secrets of OEE, Six Sigma, Lean

Pepsi Bottling Ventures boosts uptime, improves OEE scores 21 points, adds more than an hour to daily productivity and covers automation costs in one year in Nampa, Idaho, the project's leader told attendees learned at The Automation Conference session.

Author — Bob Sperber, Bob Sperber

May 22nd, 2012



Chris Bacon, production manager with Raleigh, **Pepsi Bottling Ventures** (www.pepsibottlingventures.com) in Nampa, Idaho, achieved dramatic results by applying overall equipment effectiveness (OEE) improvements across both legacy and new equipment using a combination of Lean & Six Sigma principles. He shared some of the secrets of his success at the 2012 Automation Conference session.

The packaging track session, "Combining Lean/Six Sigma with Automation for OEE improvements," showed how universal quality and management tools can be made to serve specific needs. On its face, OEE provides an aggregate index of availability, performance rates and quality to provide uptime and productivity comparisons. Six Sigma uses statistical tools to eliminate the causes of defects and variability. And Lean Manufacturing has come to be known as something of a superset of management tools and processes by which companies root-out waste in all its forms.

Bacon took the audience through challenges including need to improve performance, increase line availability, and attain better final quality results.

In one example, trending and analysis, the plant identified and addressed erratic filler tank pressures involving a CO2 valve that was opening too late and causing extreme over-pressures. In another, changeovers were reduced from 65 minutes in 2008 to 25 minutes in 2009, opening 126 minutes a day "to reduce reliance on co-packers and add plant capacity."

Another example of the plant's success is a rise in OEE scores from 62 percent in 2008 to 83 percent in 2012, thanks in large part to a downtime tracking system and the intelligent acquisition of automation systems. One aspect of downtime tracking entailed operators assigning specific "reason" codes to off-spec events. It's particularly telling that in designing the error tracking system, Bacon didn't include include "human error" as a reason code. Why?

Bacon wanted to eliminate the "Big Brother effect" and instill "a collaborative culture across all departments, and not brand personnel as root causes. As a manger, human error is not a reason code. Rather it is a developmental opportunity to improve that person's business impact."

Bacon provided additional details of problems and solutions, but overall, these tools and overall strategy helped Pepsi Bottling Ventures realize a return on investment payback on its automation expenditures in less than a year.

Ongoing improvement processes have improved operations and "helped to support our business growth," Bacon says. "We've reduced waste across all aspects of our process stream. We've opened up more time for increase production, improved performance and just as importantly opened-up more time for our personnel to support all aspects of the business beyond the normal plant outline."

These efforts transcend the plant's operations; Pepsi Bottling Ventures, with headquarters in Raleigh, N.C., is is the nation's largest privately-held manufacturer, seller, and distributor of Pepsi-Cola beverages.

Bacon acknowledged a collaborative relationship with **Apex Manufacturing Solutions** (www.apexmfgsolutions.com), Boise, Idaho, for helping design OEE and Six Sigma programs were "to support our specific business needs.



AutomationWorld
LEADERSHIP IN
AUTOMATION 2020

- ⊕ Actuators and Valves
- ⊕ Alarm Management
- ⊕ Barcode & RFID
- ⊕ Cables, Wiring & Connectors
- ⊕ CAD/CAM/CAE
- ⊕ Cloud Computing
- ⊕ Communication Protocols/Standards
- ⊕ Data acquisition
- ⊕ Databases/Historians
- ⊕ DCS
- ⊕ Drives
- ⊕ Edge Computing
- ⊕ Embedded Control
- ⊕ Enclosures
- ⊕ Encoders
- ⊕ Energy Management
- ⊕ ERP
- ⊕ HMI Hardware
- ⊕ HMI Software
- ⊕ Hydraulics/Pneumatics
- ⊕ I/O Modules
- ⊕ Industrial PCs
- ⊕ Instrumentation
- ⊕ IoT Platforms
- ⊕ Maintenance/Reliability
- ⊕ MES/MOM
- ⊕ Mobility
- ⊕ Motion Control Systems
- ⊕ Motors
- ⊕ Networking & Connectivity
- ⊕ PLCs/PACs
- ⊕ PLM
- ⊕ Power Supplies
- ⊕ Process Control Software
- ⊕ Quality Software
- ⊕ Robotics
- ⊕ RTU
- ⊕ Safety, Machine
- ⊕ Safety, Process
- ⊕ SCADA
- ⊕ Security
- ⊕ Sensors, discrete
- ⊕ Sensors, process
- ⊕ Services
- ⊕ Simulation & Modeling
- ⊕ Supply Chain Software
- ⊕ Test & Measurement
- ⊕ Vision
- ⊕ Wearables

[View All Companies >](#)



THE BEST FROM OUR EDITORS

Discover *Automation World's* most read articles!

[DOWNLOAD HERE](#)