



Latest software for food and beverage sectors, with focus on solutions for meat facilities

A number of routines should be followed to avoid health hazards in food and beverage industries.

Many challenges present themselves in meat facilities. This article focuses on three common challenges for food and beverage manufacturers: legislation, process control and cost impacts.

Nick Pieters, CEO of Xpitem elaborates on the challenges. He talks about a “solution” - his company’s environmental monitoring system.

Addressing the three challenges:

Legislation:

- Ensuring compliance to local, provincial and national government food safety legislations.
- Ensuring compliance to overseas food safety and other international quality management standards if food

products are to be exported.

- The dearth of well trained and knowledgeable food safety inspectors.

Process control:

- Implementation and maintenance of Hygiene Management Systems (HMSs), Quality Management Systems (QMSs) and Hazard Analysis Critical Control Point (HACCP) systems.
- The constant training of QA personnel as well as ensuring the QA personnel are using the various food safety related systems put in place to identify and implement the necessary corrective action in the event of a food safety incident.
- Constant record keeping regarding food safety related parameters for

- (i) internal and external auditing purposes as well as summation; for (ii) any recall actions; and for (iii) reporting food safety incidents. The related parameters in question comprise environmental conditions for production and storage operations. Chemical and organic measurements are the key amongst a host of other measureable food safety parameters.
- Lack of access to other food suppliers’ food safety records; [accredited third party audits are lacking].
- Too little or no timeously notifications of suspected or detected incidents affecting the food safety processes and in turn the food products themselves.
- Cost impacts
- The operational costs of implementing and maintaining systems (automated or manual) for recording keeping as required as part of the HMS, QMS and HACCP systems.



- The escalating costs of personnel required to maintain the necessary standards and compliance to legislation.
- The escalation cost associated with the resolving of a food safety incident as soon as possible during production as well as post-production operations.
- The operations cost to production and business operations when incorrectly recorded. Also, the lack of immediate access to food safety related production parameters.

Pieters says the challenges listed above can be overcome with automated systems that:

- Capture and present the data in user-comprehensible format as required for the intended audience regarding food safety aspects.
- Become or form part of the company's HACCP system.
- Is customisable to meet the requirements as stated in the various current and proposed standards and legislative regulations.
- Provides the executive summary and dashboard overview on HACCP parameters to company management and QA personnel monitoring food safety operations.
- Generates notifications or alerts in real time when monitored food safety conditions are triggered upon detection of non-conformances.

Pieters says Xemote™ Remote Monitoring System offers a solution.

“It has been developed as the principal solution to, on its own, alleviate the many challenges faced by South African food production companies today.”

He says this high performance software compliments the Xemote™ monitoring hardware.

“Together they deliver a complete end-to-end monitoring, reporting and historic data analysis solution.”

Pieters says it offers users the following benefits:

- Real Time Visibility into Processes - provides immediate availability of actionable information.
- Advanced Event Activation - allows pro-active management of abnormal situations.
- Electronic Process History - identifies negative trends that may lead to food safety incidents and provides processed historical data in manageable and readable formats for instant audit readiness.
- Mobile Access - keeps the relevant personnel fully informed on the plant's performance by providing access to vital information at their fingertips, regardless of their physical location, using any form of internet connectivity

such as a smart device or PC.

- Resource Management - electronic systems reduces the resources currently required to manually collect records and process data, reduce response time and system downtime, eradicate the use of printed paper, all resulting in substantially reduced operational costs.
- System Integration - Xemote™ is positioned as the monitoring system of choice for future integration with electronic Hygiene Assessment System modules and integrates with other ERP systems.

These benefits ultimately lead to improved process control and risk management of various critical application areas and significantly supports:

- Troubleshooting problems faster.
- Effortlessly identifying improvement opportunities.
- Cost effectively managing regulatory requirements.
- Improving enterprise resource planning.

“This is vital to the food production companies that want to minimise cost, maximise productivity, reduce waste, provide traceability for auditing purposes, and maintain safety and environmental compliance.”

He concludes: Xemote is a proudly South African technology that offers a comprehensive range of monitoring solutions with local support

Xemote integrates with ERP systems such as SAP, Oracle
“Xemote is an economic, generic monitoring system




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that offers low cost of ownership and provides a One System – Many Sensor Application Solution.”

This combination of genuine affordability, flexible solutions specifically developed for the food production industry, integration with other systems and generic capabilities makes the Xemote system the “Best-in-Class” monitoring solution available on the market today, according to Pieters

Xemote has been commercially deployed by two large red meat abattoirs in South Africa.

“This has improved their risk management and Critical Control Point monitoring ensuring optimised production availability.”



InfinityQS describes its software

Doug Fair, COO of InfinityQS International, discusses his company's software, which claims to optimise operations, resulting in a more 'ProFicient' plant.

“Competition is fierce in today's food and beverage industry. On top of that, companies are under pressure to meet compliance regulations, produce a wider range of products and prevent brand-damaging recalls.”

He says in an effort to compete for market share and assuage some of these industry challenges, food and beverage manufacturers seek to optimise plant operations through technology.

“Today's most forward-thinking manufacturers are opting for enterprise quality systems to achieve greater efficiencies on the plant floor through advanced data collection and analysis.”

Fair says InfinityQS ProFicient is an enterprise quality system powered by a centralised Statistical Process Control (SPC) analytical engine.

“It enables global manufacturers to proactively monitor, analyze and report on Manufacturing Intelligence to improve quality, decrease costs and make smarter business decisions.”

Capabilities

“On the shop floor, ProFicient collects quality data in real time and makes it available to operators via a user-friendly software interface. From there, operators can proactively monitor production processes to ensure everything is

performing at expected levels and take corrective action if issues arise,” Fair explains.

The result, he says, is less downtime, reduced waste and higher product quality.

“Because ProFicient automates data collection and analysis, operators are more productive and there is minimal room for human error. Moreover, the software automatically logs downtime with critical product and process data and creates a historical record.”

This information can provide insight into maintenance planning needs and opportunities for process enhancements.

“Again, the result is less downtime and higher yields.”

Fair says the ProFicient software's ability to optimise operations extends beyond the plant floor.

“When ProFicient collects data, it aggregates it into a single database repository, or hub, where its 'second life' is revealed. Within the hub, manufacturers can easily slice and dice data, track Key Performance Indicators (KPIs), create reports and obtain insight – Manufacturing Intelligence – for their processes.”

Using this insight, manufacturers can determine the Overall Equipment Effectiveness (OEE) of machinery.

Manufacturers will be able to determine whether all lines are performing optimally or if there is a particular machine producing defective units.

In addition, ProFicient allows users to compare machine-to-machine

performance by analysing process data across product codes, shifts, batches, lot numbers or any combination of descriptors.

“Using manufacturing intelligence garnered through ProFicient, companies can also pinpoint opportunities for continuous improvement.”

He says for manufacturers with multiple plants, ProFicient's cloud-based deployment option, “ProFicient on Demand”, is particularly beneficial.

ProFicient on Demand streamlines global data collection and analysis with a unified data archive, so operators and quality managers can perform cross-plant comparisons. By comparing operations from plant to plant, manufacturers are able to identify and replicate best practices to improve processes enterprise wide.

“Once deployed, ProFicient provides the plant with the ability to meet compliance standards, monitor supplier quality, and integrate with other manufacturing and business systems, among others.”

According to Fair, manufacturers which embrace enterprise quality systems as an integral part of their efforts to optimise production processes will quickly achieve competitive edge and better position themselves for the future.

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