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SMARTER FOOD AND BEVERAGE
MANUFACTURING STARTS HERE

IT'S TIME TO THINK DIFFERENTLY ABOUT FLUKE

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Staying **reliable** under pressure

Not long ago, food and beverage manufacturing ran on predictability. Established routines, consistent demand, and relatively straightforward compliance requirements made for a stable operating environment. But those days are gone.

Today, manufacturers face a whole new set of pressures. From changing consumer preferences to stricter hygiene laws, from fluctuating energy costs to sustainability demands—modern plant managers have to tackle more complexity, with fewer resources. And in an industry where product quality and safety are paramount, there's little room for error.

Unplanned downtime isn't just inconvenient—it can mean spoiled batches, production delays, or compliance breaches. But like plant managers, maintenance and engineering teams are also under pressure to do more with less. Ageing infrastructure, tighter margins, and the constant drive to modernise make it harder to maintain precious uptime, ensure food safety and hit production targets.

That's why operational resilience matters more than ever. It's what underpins product consistency, regulatory compliance, and cost efficiency in today's fast-moving food and beverage sector. And it's the key to staying competitive without cutting corners.





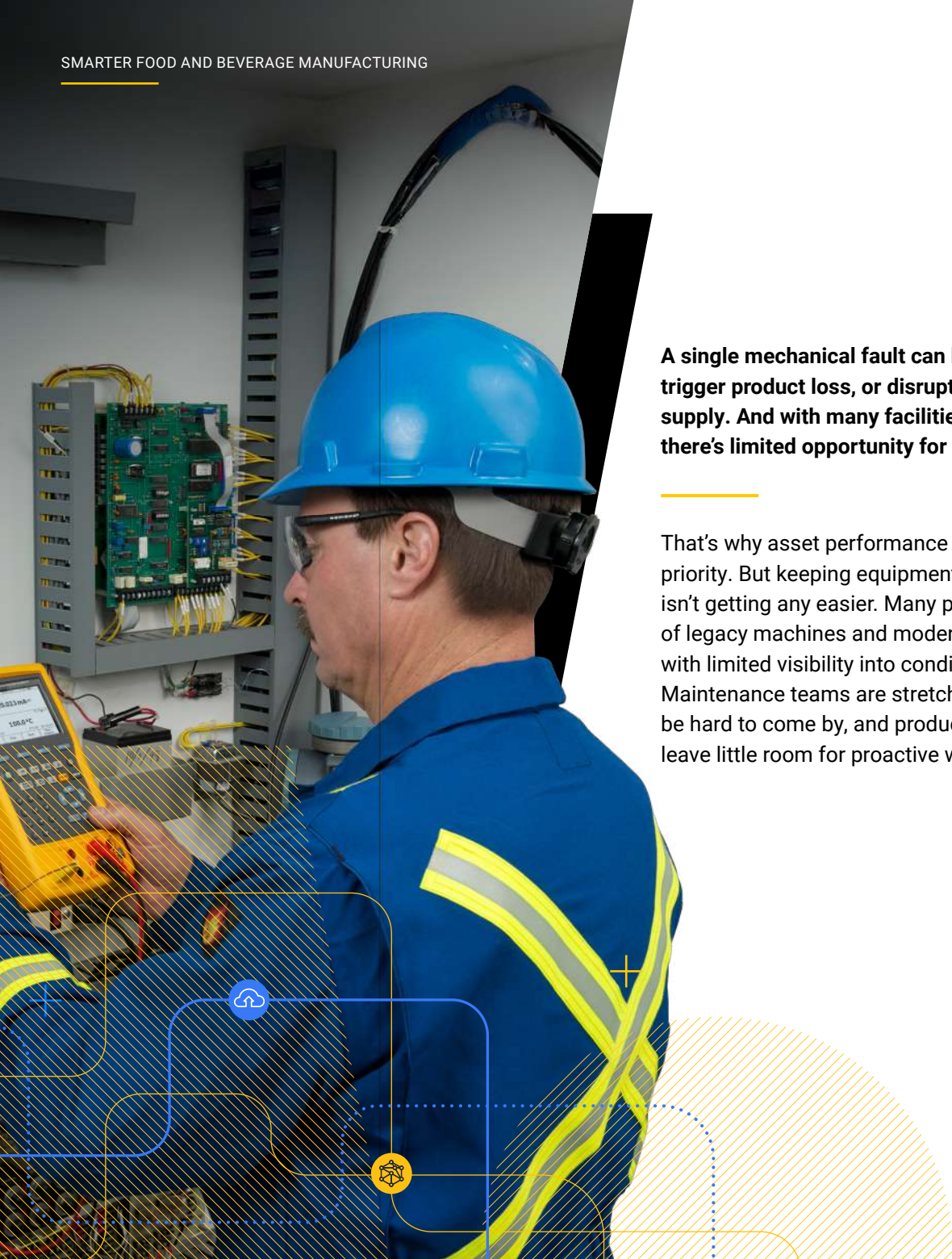
This eBook explores the evolving challenges facing **food and beverage manufacturers**, and how maintenance teams, engineers, and operational leaders can respond.

From tackling downtime to staying audit-ready, you'll find practical ways to boost performance, strengthen compliance, and support your sustainability goals. And, along the way, you might be surprised by how much Fluke can help.

Keeping **critical assets** running

Whether it's ovens, chillers, pumps or packaging lines, food and beverage production relies on a diverse mix of equipment—often running at high speed and under tough conditions.





A single mechanical fault can halt production, trigger product loss, or disrupt downstream supply. And with many facilities operating 24/7, there's limited opportunity for downtime.

That's why asset performance is a constant priority. But keeping equipment in top condition isn't getting any easier. Many plants still run a mix of legacy machines and modern systems, often with limited visibility into condition or performance. Maintenance teams are stretched, spare parts can be hard to come by, and production schedules leave little room for proactive work.

Add in the growing focus on sustainability, energy efficiency, and waste reduction, and the margin for error narrows even further. Teams need smarter ways to monitor performance, detect faults early, and fix issues fast—without disrupting operations or compromising product integrity.

Condition-based maintenance, powered by accurate diagnostics, is part of the answer. With real-time insights and data-led decision-making, teams can fix what matters, when it matters—maximising uptime and protecting product quality while using fewer resources to do it.

And that's where Fluke can help.

Five **key operational issues** impacting food and beverage manufacturing

1 **Unplanned downtime.**

Production lines often run at high speed with tight changeovers, leaving little tolerance for breakdowns or delays. Unplanned stoppages can lead to lost batches, missed orders, and costly clean-up.

2 **Tightening compliance demands.**

From HACCP and allergen controls to hygiene audits and traceability, staying on the right side of regulation is more complex and more critical than ever.

3 **Ageing assets and infrastructure.**

Many plants still rely on older machinery that's hard to maintain, lacks modern diagnostics, or no longer meets energy and hygiene standards.

4 **Labour and skills shortages.**

A shrinking pool of skilled maintenance engineers means fewer hands on deck, and that puts more pressure on overstretched teams to keep things running.

5 **Sustainability and energy use.**

Energy-intensive processes and pressure to reduce waste mean manufacturers must find smarter ways to cut emissions, water use, and resource consumption...without impacting output or quality.



Making **compliance** second nature

In food and beverage manufacturing, hygiene and safety aren't just priorities—they're non-negotiables.





One missed check, one faulty sensor, or one unplanned stoppage can lead to contamination, failed audits, or costly recalls.

But staying compliant isn't just about ticking boxes. It takes reliable processes, real-time visibility, and tools that help teams stay ahead—without disrupting production or adding complexity.

That's where Fluke comes in.

From cleaning validation and temperature checks to sensor calibration and diagnostics, our tools help you maintain high standards, spot issues early, and respond fast—so compliance becomes part of how you work, not a scramble to catch up.

5 quick tips to **boost performance** and sustainability

- 1** Identify energy hotspots using thermal imaging or power quality analysis to uncover where your systems are wasting electricity, gas, or water.
- 2** Log equipment energy use over time to detect patterns, inefficiencies, and seasonal variations that impact operating costs.
- 3** Verify cleaning and cooling systems are operating efficiently—helping reduce water consumption and energy demand during CIP and refrigeration cycles.
- 4** Spot leaks and losses in compressed air and steam systems using acoustic or pressure diagnostics—often quick wins for reducing waste.
- 5** Track progress with simple metrics that link equipment performance to energy savings, compliance, and environmental impact.



Smarter systems. **Better outcomes**

Fluke has long been recognized for delivering the tools that keep food and beverage manufacturers moving—precise, rugged and built to withstand the toughest environments. But today, we're a lot more than that.



From power quality to calibration to thermal and acoustic imaging, condition monitoring and more, Fluke is expanding what's possible. So your engineering and maintenance teams can work safer, smarter, and more sustainably.

Whatever the challenge - reducing downtime, staying compliant, managing energy use or ensuring the integrity of your equipment - Fluke delivers the practical answers your teams need to keep production safe, resilient and ready for the future.

1 Power management

Food and beverage manufacturing often relies on sensitive control systems and high-energy loads. Voltage drops or poor power quality can trigger cascading failures or compliance issues. Fluke's power quality analysers, energy loggers and clamp meters help identify and resolve power issues fast—before they impact production.

Key benefits

- ✓ Identify and address power issues early, protecting uptime and production stability.
- ✓ Precisely measure and optimize energy usage, supporting sustainability and reducing operational costs.
- ✓ Simplify regulatory compliance through traceable power quality data.

2 Calibration

Calibration accuracy underpins compliance, process safety, and productivity. Fluke's precise, digitally integrated calibration tools provide full traceability, reduce manual errors, and simplify record-keeping—transforming calibration from an audit risk into a clear operational advantage. From documenting process calibrators to multifunction instruments, Fluke solutions ensure that you meet strict calibration requirements with ease.

Key benefits

- ✓ Accurate, repeatable calibration processes, reducing compliance risks.
- ✓ Digitally integrated records that streamline audits and regulatory documentation.
- ✓ Reliable calibration performance, ensuring consistent product quality.



3 Networking and connectivity

Fluke Networks provides advanced cable testing, fiber-optic certification, and troubleshooting tools, ensuring robust, secure network performance across your production environment. This reliable connectivity is the foundation for precise real-time monitoring, accurate data capture, and seamless digital integration across production-critical systems.

Key benefits

- ✓ Quickly identify and resolve network issues, minimizing downtime risks.
- ✓ Ensure stable, secure data flow, critical for real-time monitoring and digital documentation.
- ✓ Maintain compliance and integrity of production data through robust network reliability.

4 Acoustic imaging

Fluke acoustic imaging tools make it easy to identify leaks and equipment faults early—without interrupting production or entering sensitive areas. These intuitive devices precisely pinpoint compressed air leaks, vacuum leaks, or electrical partial discharge, allowing your teams to respond proactively and efficiently. Reducing waste and energy costs becomes straightforward and practical, rather than complicated and disruptive.

Key benefits

- ✓ Rapidly detect leaks and electrical faults without shutting down production.
- ✓ Quickly reduce energy waste and operating costs.
- ✓ Enhance safety by pinpointing electrical risks early.

5 Thermal imaging

Thermal imaging transforms predictive maintenance from theory into practice. Fluke's rugged, intuitive thermal cameras rapidly detect overheating, mechanical wear, or insulation issues. Your teams can safely and proactively spot problems in critical equipment, HVAC systems, electrical panels, or production lines—long before they become serious faults. It's a practical, visual approach that significantly reduces downtime risks and maintenance costs.

Key benefits

- ✓ Identify potential faults early and safely, without disrupting production.
- ✓ Improve predictive maintenance, reducing reactive downtime and costs.
- ✓ Clearly document thermal profiles for compliance and maintenance audits.

6 Condition monitoring

Condition monitoring is your operational early-warning system, turning reactive maintenance into proactive reliability. Fluke's connected condition-monitoring solutions offer real-time diagnostics on vibration, temperature, and equipment performance—providing clear, actionable insights. Your teams get advance warnings of developing issues, enabling well-planned, proactive interventions instead of costly, disruptive repairs.

Key benefits

- ✓ Continuous monitoring of critical assets, reducing unplanned downtime.
- ✓ Transition from reactive maintenance to proactive reliability management.
- ✓ Improved operational certainty through real-time, predictive insights.



Built on trust. Engineered for **what's next**

For more than 75 years, Fluke has stood behind critical industries, helping your operations stay productive, compliant, and safe—no matter how complex the challenges. But trust isn't built solely on heritage or past successes; it comes from consistently solving tough operational problems and actively shaping what's next, right alongside your teams.





Safety is fundamental. Every tool and solution Fluke develops is specifically designed for the demanding environments your teams face. Solutions like thermal imaging let you diagnose equipment issues safely and from a distance—helping prevent incidents, reduce downtime, and minimize operational risks. Here at Fluke, we're all about the outcomes: protecting people, products, and processes—not just adding features.

Innovation at Fluke is driven directly by your real-world challenges. Advanced tools and connected systems simplify workflows, translating diagnostic insights into immediate actions that reduce downtime, errors, and complexity. This streamlined approach means fewer interruptions, less risk, and more reliable results. So your teams can achieve consistently higher operational standards.

We also know the pressure food and beverage manufacturers face to meet environmental and sustainability goals, so Fluke is here to actively support them. Precision-aligned, properly maintained equipment reduces waste, cuts emissions, and significantly lowers energy costs. Efficient machinery not only boosts production but also accelerates progress toward your targets—visibly demonstrating your commitment to continuous improvement.

These core commitments—safety, innovation, and efficiency—aren't just concepts at Fluke. They're the daily practices and clear standards that shape how we support your operations today and help you confidently navigate the future.



Our commitment is anchored
in **three core values**:



Safety

Protecting people, processes, and products with rigorous testing, trusted accuracy, and tools designed for the highest-risk environments.



Innovation

Solving real-world challenges through customer-driven engineering—from smarter diagnostics to connected workflows that make complex work simpler.



Energy and efficiency leadership

Supporting industries as they modernize and decarbonise, helping sites meet sustainability goals without compromising reliability or compliance.



Modern manufacturing starts with **reliability**

Food and beverage manufacturing is evolving—towards data-driven decisions, leaner operations, and more efficient ways of working. But the fundamentals never change: operational certainty, regulatory compliance, and the continuous drive for reliable performance are still key.

Your operations face significant change—and significant opportunity. Regulatory standards, sustainability goals, and digital transformation demands are evolving quickly. Navigating these successfully demands more than reactive tactics; it requires practical solutions, reliable insights, and proactive management.

Operational reliability isn't just about managing risk—it offers genuine strategic advantage. From precise calibration to stable power systems, predictive maintenance to advanced thermal and acoustic diagnostics, solutions exist today to help your site confidently meet tomorrow's challenges.

Fluke is more than just your trusted tool provider. We're your partner in operational excellence—helping you modernise with confidence, reduce downtime, and meet tomorrow's challenges head-on.

**Think you know Fluke?
It's time to take another look.**



To find out more:

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