Five steps to smarter manufacturing

In today's high-pressure beverage manufacturing environment, speed, accuracy and agility are no longer optional – they are essential. Bryan Sapot, VP of Smart Factory at Nulogy, shares a five-step roadmap to help food and beverage manufacturers move beyond outdated practices and unlock the true potential of real-time production data.

Manufacturers today operate in a market where resources are tight, time is precious and demands are ever escalating. This is especially true for third-party manufacturers with large brand customers, where trust and collaboration are key to successful relationships.

When demand shifts suddenly or disruptions hit unexpectedly, rapid and effective response is critical. Yet many manufacturers lack real-time visibility into their plant floor. This leaves them analysing outdated metrics with an incomplete view of operations – after the shift has ended and the impact on throughput has already been felt.

I liken this mindset to driving using only the rear-view mirror: you can't fix (or avoid!) what you can't see. Real-time data visibility is no longer a luxury. It's a necessity.

In my 25 years in the industry, I've seen many manufacturers stall simply because they didn't know where or how to begin with real-time production monitoring. But it doesn't take a full overhaul to see results, just the right steps and a commitment to follow through.

Here are the five foundational steps manufacturers can take to harness real-time production monitoring and begin their journey toward a truly smart factory.

1. Create a baseline with real-time production monitoring

You can't control what you don't measure. This is a mantra that sits at the core of any smart manufacturing initiative. The first step toward improvement is understanding your current state. That's where real-time production monitoring comes in.

By equipping machines with IoT sensors and deploying real-time tracking tools, manufacturers can collect operational data such as uptime, downtime, speed and quality rates. This data feeds directly into operational equipment effectiveness (OEE), a key manufacturing metric derived from availability, performance and quality.

This baseline doesn't just highlight inefficiencies: it becomes the foundation for all future improvements. In the food and beverage sector, where spoilage, contamination or mislabelling can be costly, that insight can also help ensure quality and compliance.

2. Visualise the factory floor

Once the data is flowing, it's time to put it to work. Visual factory management turns raw numbers into clear insights – right where they're needed most: on the floor.

When teams can see their performance in real time – on displays, dashboards and scoreboards – they react faster. Colour-coded indicators (green, yellow, red) immediately communicate whether performance is on track or slipping. It's not just helpful; it's neurological. The human brain processes visuals 60,000 times faster than text.

This approach creates a shared awareness across departments and shifts, building accountability and cohesion. Think of this as turning your data into a language your team can instantly understand, without stopping production to interpret it.

3. Align the team on why OEE matters

Technology is only half the battle; culture is the other half. If your team doesn't understand why these metrics matter, they won't care enough to act on them.

Improving OEE helps frontline operators do their jobs more efficiently and with less stress. For example, micro-stoppages (tiny, recurring downtimes) may seem trivial in the moment, but they can aggregate into serious bottlenecks. Tracking these events lets operators stop reacting and start preventing.

From maintenance to quality assurance, everyone plays a role in OEE. That's why it's essential to educate each team about how their work connects to availability, performance and quality, and ultimately, business success.

The best systems fail if the people running them don't see the value. Show them the quick wins. Demonstrate how life gets easier, not harder.

4. Build a culture of 'getting to green'

With clear metrics and a shared understanding in place, the next step is building a culture of accountability. That's where 'getting to green' comes in.

In this case, 'green' means more than just a colour on a screen – it's a mindset. Assign clear targets to each team: availability to maintenance, performance to production, and quality to QA. As performance data updates in real time, teams can respond immediately. And when goals are hit, celebrate them. This feedback loop fosters proactive problem-solving and reinforces a culture of continuous improvement.

Like Toyota's Andon system, empowering operators to act, and making performance visible to all, creates ownership and pride on the floor.

5. Run daily production meetings backed by data

Finally, to keep momentum, embed daily production meetings into your routine. These short, focused gatherings should unite operations, maintenance, quality and supervisors around a common agenda: what went right, what went wrong and what to do next.

With real-time data as the foundation, these meetings become a vehicle for rapid response, shared learning, and sustained improvement. Tiered meetings, from operator huddles to strategic reviews, ensure that every level of the organisation is aligned and accountable.

The smart factory is not a destination: it's a daily discipline. And that discipline starts with conversations grounded in facts, not guesses. ●

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