

WEBEE.IO

FOOD MANUFACTURING

INSIDE THIS EBOOK

A LOOK INTO THE FOOD MANUFACTURING LANDSCAPE AND HOW TO INCREASE SUSTAINABILITY WHILE ADDING EFFICIENCY AND REDUCING DOWNTIME



FOOD MANUFACTURING

WEBEE IS A TECHNOLOGY COMPANY THAT DEVELOP SOLUTIONS TO INCREASE THE VISIBILITY, SUSTAINABILITY, AND EFFICIENCY OF INDUSTRIAL OPERATIONS. OUR NO-CODE PATENTED TECHNOLOGY MAKES IT POSSIBLE TO HAVE INTERNET OF THINGS (IIOT), ARTIFICIAL INTELLIGENCE AND COMPUTER VISION SOLUTIONS WORKING IN HOURS.

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THE MOMENT IS NOW

FOCUS ON THE FUTURE

Failure to act is the biggest obstacle to progress.
Learn how to act fast and grow your organization
into the future



IMPROVING EFFICIENCY AND REDUCING COSTS HAS LONG BEEN A GOAL IN THE FOOD MANUFACTURING SECTOR

However, cumbersome manual processes still prevail, and many plant managers and owners are reluctant to embrace new technology for fear it will lead to plant downtime, add unnecessary costs, or complicate operations. While many plant processes are automated, legacy systems are not optimized to advance to the next level. As a result, waste continues to be an issue, as does downtime and inefficiency.

Data is captured, but some tasks still depend on manual data collection, which is both inefficient and lacking in scope – and that’s an understatement.

While we’re not telling you anything you don’t know (so far), you probably already realize that the situation is unsustainable. Competition is fierce these days, and it is critical to make the best use of your resources so you can remain profitable. Minimizing downtime and maximizing productivity are the ultimate goals. Make no mistake – companies that leverage technology to create new efficiencies will ultimately dominate the landscape. However, it’s not a hopeless situation. You, too, have access to the same innovations that are giving your competitors a leg up, and the solutions are more accessible than you might realize. With strategic deployment, and without spending millions of dollars to fund your transformation, you too can achieve significant cost reduction, waste reduction, and greater process efficiency.

THE SOLUTION

While you might be tech-savvy, there's no guarantee your workforce has the same mindset. The food manufacturing industry is notoriously slow to adopt new methods, so it's reasonable to think there will be some pushback, at least initially.

What if there was a solution that made processes easier to manage instead of more difficult? One that automates tasks, monitors machine function, reduces downtime, and optimizes worker efficiency? Better yet, what if it's a solution that doesn't require any specific technical know-how to deploy and operate?

Before we get into how to get it, let's look at what the solution is, how it works, and how it helps you avoid downtime and increase efficiency.

INTRODUCING THE INDUSTRIAL INTERNET OF THINGS, ALSO KNOWN AS IIOT.

IIoT is nothing new. The retail, logistics, and manufacturing sectors have relied on IIoT for decades to increase visibility, traceability, and accountability, reduce costs, and improve customer service and

satisfaction.

Today, IIoT is even smarter, courtesy of advanced technologies like artificial intelligence (AI) and machine learning, along with advances in business intelligence and analytic software.

WHAT IS THE INDUSTRIAL IOT (IIOT)?

IIoT is a network of connected "smart" devices that collect, monitor, and exchange data. That data is then analyzed by a software platform that is capable of delivering actionable insights in real-time, facilitating just-in-time business decisions such as shutting a valve.





The result? Optimized machine function, reduced downtime and maintenance costs, and less human time spent dealing with all of the above.

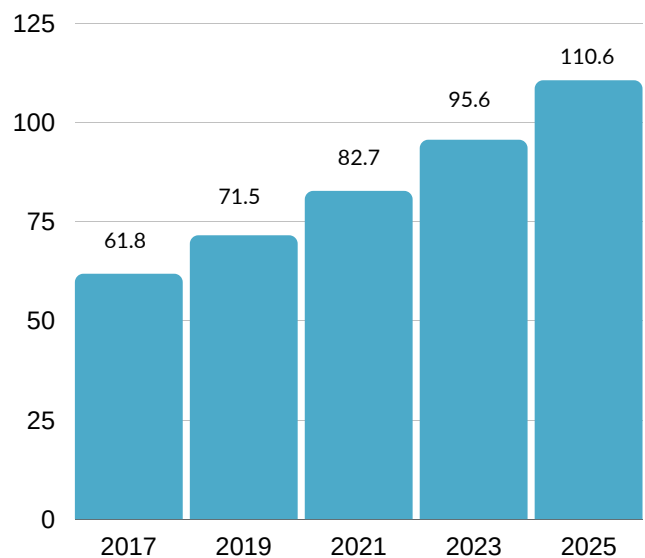
Here's an example. Let's say a temperature gauge on a machine is malfunctioning. If it fails, the product will face a significant loss, both in wasted product and machine downtime.

In an IIoT-enabled environment, sensors monitor the machine, the temperature fluctuation is flagged, and the system sends an alert to the plant foreman. The foreman can then address the issue, redirect product to another machine, and take the machine offline while a repair order is generated.

The value derived from this process is that the anomaly is addressed before the machine has a chance to fail. It is taken offline only briefly with no impact on production levels. There were no safety issues, injuries, or contamination concerns,

and employees continued to be productive. Only one person was involved in mitigating the problem, so not a moment was wasted.

Industrial Internet of Things market size worldwide from 2017 to 2025* (In billions USD)



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Industrial Internet of Things market size worldwide from 2017 to 2025*
<https://www.statista.com/statistics/611004/global-industrial-internet-of-things-market-size/>



IT'S TIME TO ADAPT

COVID-19
Solutions that answer many of the challenges you
faced today



In the midst of the COVID-19 pandemic, organizations have the opportunity to build on the lessons learned and embrace the benefits of emerging technologies while designing the future of work. Today, more than ever creating resilient operations is imperative. We need processes that adapt to changing environments without risking efficiency.

Here are some of the areas where IIoT can add tremendous value:

1. LACK OF VISIBILITY

You already own your data, and you generate a lot of it. The biggest issue here is that the data is not immediately actionable. Most of the time, it's considered after the fact.

Traditional manufacturing systems (PLCs) are not flexible enough. The data collected is often siloed, so the people who need it most can't access or react to it in time to make a difference. Accessing data is not the issue. Having insights to act upon based on that data is the real struggle.

The solution: IIoT sensors monitor machine function in real-time, delivering actionable insights, and alerts to personnel who can act immediately.

2. MANUAL EFFORTS ARE INEFFICIENT AND INCONSISTENT.

A lot of critical processes, like receiving, machine operations, and productivity monitoring, are still done manually. This also becomes a big complication when new regulations and safety measures prevent personnel to carry on with their tasks.

The solution: Sensors monitor every aspect of operations, delivering real-time insights to the plant manager, reducing errors, and optimizing efforts throughout the workforce.

3. SOME THINGS ARE NOT MONITORED AT ALL.

You can't control what you don't measure. If losses are occurring as a result of a metric you are either not measuring at all, you're leaving money on the table. Even when production is going well, and efficiency levels are met, there are myriad other points that affect production. When these data points are not connected, processes are subject to failure, resulting in delays or shutdowns until the issue is identified.

The solution: IIoT monitors all aspects of production and supply chain, anticipating delays and other issues so solutions can be implemented, and customers advised before the delay becomes their problem too. You can also intelligently predict future scenarios and quickly adapt resources to avoid downtime.

4. FAILURE TO ACT IS THE BIGGEST OBSTACLE TO PROGRESS

Ultimately, avoiding the implementation of new technologies will place you behind the eight ball from a market perspective, and will put your business at risk as you could be less prepared for unexpected scenarios like COVID-19.

Customers today rely on predictable supply chains to keep their operations on track, and as

time goes by, they defer to companies they know can deliver. To add to the complexities, today's end-consumers are more demanding than ever, and there is a new layer of complexity added by the security measures of COVID-19. Customers' concerns include provenance and product traceability, aspects that can't reasonably be managed without technology, and certainly not at scale.

*FOOD AND
BEVERAGE
MANUFACTURERS
FACE MULTIPLE
CHALLENGES
DURING
PRODUCTION AND
**THEY RESULT IN 20%
LOSS OF
PRODUCTIVITY***

Aberdeen Research

The real cost of machine downtime study <https://www.machinmetrics.com/blog/the-real-cost-of-downtime-in-manufacturing>



WHY IIOT IS RIPE FOR THE PICKING IN FOOD MANUFACTURING

Food manufacturing is a time-sensitive process. Producers are necessarily concerned with expedience. It is critical that products reach the next step in the supply chain in a timely manner.

FOOD SAFETY AND TRACEABILITY

IIoT implementation increases food safety and enables traceability at the item level. It offers provenance-minded niche producers and their sophisticated consumers a way to verify where their food is coming from and how it was grown and processed. In terms of public health, item-level traceability enables fast and

efficient recalls, minimizing the risk of foodborne illness and help avoid any possible disruptions in supply chain.



SUSTAINABILITY

One-third of all food produced every year is lost to waste or spoilage. According to the USDA, 40 percent of that waste comes from inefficiencies in production. Outdated processes lead to lost profits and unsustainable business models, underscoring the need for IIoT as a reliable and sustainable solution.

MAXIMIZING PRODUCTIVITY, ELIMINATING DOWNTIME

The ability to make critical decisions instantly is the difference between a successful and efficient production or a catastrophic failure. The power of AI and IIoT provides manufacturers with the visibility they need to proceed in real-time.

This might sound like a complicated process, but it doesn't have to be. In its most ideal iteration, an IIoT solution leverages technology that doesn't interfere with existing production network settings, including PLC, machines, SAP, ERPs, and others. It fits intuitively with your workflows, helping you manage and monitor your systems remotely without the need for specialized technical expertise, coding, or complex programming.

INTERCONNECTED DATA ANALYSIS

Anything that can be measured becomes a data point. Patterns over time and various other insights become the basis for more calculated and grounded business decisions. Real-time data provides companies with a platform from which to increase the accuracy of their projections and discover new efficiencies in just about every process.

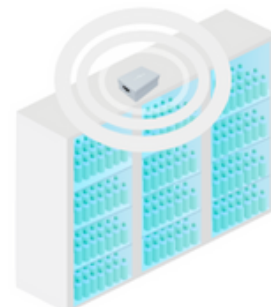
Every company produces vast amounts of data, so that's not the issue. Deriving insights from this data, and taking automated actions— that's what really matters. Contextual data, leveraged by AI, provides the rationale for timely decisions, ones that are based on reality and not guesswork.

EASY DEPLOYMENT

For companies with multiple locations and plants, alignment is essential. But with a large operation, fast deployment is critical to avoid downtime. It's not reasonable to consider replacing extensive infrastructure, and this is the challenge that most manufacturers face.

There is a widespread misconception that this level of transformation requires a million-dollar investment and a complete upgrade to all production-level machines and systems. Fortunately, the truth, and the solution, is far more accessible.

Webee's IIoT solution connects legacy machines and delivers full functionality without a large investment. It is cost-effective and easy to deploy, and won't require any downtime. Systems are up and running quickly, and your stakeholders will start reaping the benefits almost immediately.



Best of all, existing processes don't have to change drastically. Your employees can keep on doing what they do best, and production managers can do more because they have all the data they need at their fingertips. Even when managing multiple sites, insights are delivered via a simple control panel, enabling benchmarking between facilities, full visibility, and improved operational efficiency throughout the organization.

SIMPLIFIED RECORD KEEPING

No matter how meticulous internal processes might be, managing paper leads to errors and variances that often end up costing you money in the end. Managing food safety records and inventories are simplified with Webee. Files and data can be searched and recalled instantly, and inaccurate manual inventories are a thing of the past. Data is streamed to a central database in real-time, reducing the hours it would typically

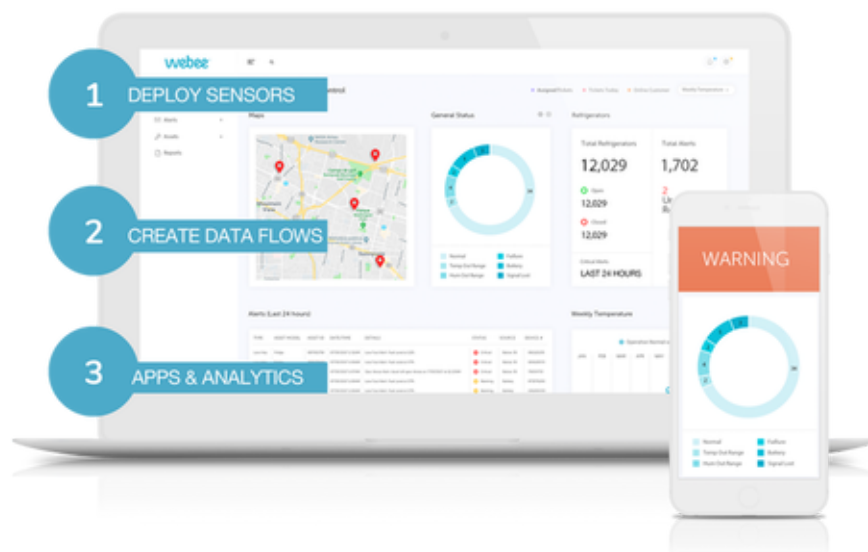
take to crunch the numbers to a fraction of a second, cutting labor costs and virtually eliminating human error. The access of this kind of historical reporting is critical to discover blind spots and eliminate long-term inefficiencies.

FOOD SAFETY MADE EASY

The FDA is now promoting an initiative called the Food Safety Modernization Act (FSMA)*. It is aimed at increasing traceability and reducing risk to consumers from foodborne hazards.

Taken in this context, keeping tabs on your supply chain and all of its variables will reduce liability, risk, and loss, and ensure public safety by preventing foodborne illness.

Temperature tracking sensors monitor products and shipments continuously, assuring quality control and compliance with food safety standards. Data is stored securely in the cloud, where it can be accessed when and if needed.



*FDAFSMA <https://www.fda.gov/food/guidance-regulation-food-and-dietary-supplements/food-safety-modernization-act-fsma>



REDUCE WASTE AND MAXIMIZE PROFITS

Food waste and loss have always been a significant global concern. When we consider this waste against the realities of famine and food insecurity all over the world, waste reduction should be a primary concern. By reducing avoidable waste and loss, it is reasonable to think we could make an impact when it comes to eliminating food scarcity, at least in our own backyard. Spoilage and loss occur at various points in the supply chain too. By some estimates, these losses amount to more than one billion tons of waste every single year. With the capacity to track critical control points in real-time, measures can be taken to reduce risk and preserve brand reputation.

If a shipment of produce experiences a significant heat spike or freeze during transit, companies receive an instant alert to act quickly, either decreasing the item's best-by date or processing the items into prepared goods, rather than throwing it away.

**52.4 MILLION TONS
OF FOOD IS SENT TO
LANDFILL, AND 10.1
MILLION TONS
REMAINS
UNHARVESTED AT
FARMS, TOTALING
ROUGHLY 63 MILLION
TONS OF ANNUAL
WASTE**



WHAT'S THE SOLUTION?

Starting with a small investment and prove instant ROI. Today, we've been talking about a technology solution that solves many of your pain points, creating new efficiencies, optimizing plant productivity, reducing costs, and maximizing profit margins.

The best part? It's easy to deploy. There's no coding, and you won't have to hire engineers to install it or data scientists to crunch the numbers.

It's also cost-effective, as you won't need to invest in new machines or retrofitting. Webee's IIoT solution is non-invasive and allows you to leverage your existing machines and sensors.

Webee sensors monitor machine function, assets, and facilities. They give you visibility into details like temperature, humidity, and

other environmental conditions that could affect operations. Grounded in IIoT and powered by AI, Webee gives you complete visibility into your entire operations, supporting sound, timely business decisions that help you stay ahead of the game, and on top of your competition. Finally, Webee is an end-to-end IIoT solution. That means there is no additional hardware or software to purchase and learn. It runs in the background, so your employees won't even know the difference, but behind the scenes, it's a powerhouse, giving you 24/7 access to your vital data, so you always know exactly what's going on in your plant and throughout your supply chain.



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