



Hygienic Manufacturing

# 5 Trends That Will Keep You Competitive

2024 EDITION

## Foreword

# Embrace the Industry Dynamics for Success in Hygienic Manufacturing

The hygienic manufacturing sector, integral to food, beverage, and pharmaceutical industries, is growing through a focus on hygienic design. This trend enhances food safety and optimizes resource use in cleaning processes, underscoring the importance of preventing contamination and improving efficiency.

Hygienic design and innovation are no longer sidecars in the F&B and pharma industries. They have become the licenses to play.

And any company —OEM or brand owner— must work diligently and focused with hygienic design to secure themselves a seat in the food, beverage and pharma markets of 2024.

In this guide, we will take you through some of the most significant trends within hygienic manufacturing and design, and look at what ideas and initiatives will shape the hygienic industries in 2024 and beyond.

**Let's dive in.**





# Key Take Aways

Trend #1

## **Sustainable Practices Increase in Importance Across the Entire Supply Chain**

Regulations and customer demand all point in the same direction: eco-friendly manufacturing. In the hygienic industry, the environmental focus goes hand-in-hand with pushing for better hygienic designs, giving innovative companies a competitive edge in a market where both are imperative.

Trend #2

## **Quality of Production Machines and Equipment Increases**

Increased competition and global standards challenge OEMs and brand owners to innovate and differentiate through advanced hygienic designs. To compete you will have to adopt a forward-thinking mindset focusing on raising quality and hygienic standards.

Trend #3

## **Resilience and Flexibility in Supply Chains Becomes Ever More Important**

Global supply chains are under intense geopolitical pressure. As in most other sectors, companies in hygienic manufacturing must adapt to this new situation with greater attention to supply chain risks and contractor agility. Only by focusing on supply chain diversification can companies stay resilient to global uncertainties.

Trend #4

## **Regulations Will Become more Stringent**

Balancing adherence to regulations with innovative designs is crucial for market relevance. Recognizing the regulations, not as a limitation but as a baseline for innovation will become a differentiator in the market, and provide you with a competitive advantage.

Trend #5

## **Digitalization Enters All Levels of Hygienic Manufacturing**

Integration of IoT, AI, and blockchain technologies is revolutionizing manufacturing. This shift demands a company-wide focus on digital literacy and cybersecurity. Both OEM's and production companies need to embrace this change and educate their employees, as well as demand digital literacy and security from their supply chain.

# Trends

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Trend #1

# Sustainable Practices Increase in Importance Across the Entire Supply Chain

Sustainability is in no way new, however in the world of hygienic manufacturing and production it can be a difficult thing to take into consideration. Nevertheless, it is a necessity, as both regulatory agencies and customers have rising demands for sustainability in all aspects of production in 2024.

## What It Means for You

You should focus on sustainability wherever possible, optimizing your production lines and machines for sustainable production. Especially consider your power and water consumption, as well as your cleaning processes.

With vigorous CO2e-reporting already in place in the EU, optimizing your factory and equipment for spending less resources will give you a competitive edge in the years to come.

# 33%

The food sector currently accounts for about one third of all greenhouse gas emissions, and up to 70 percent for the world's freshwater usage. [UN SDG](#)

## What to Do

Review your machines, there is always room for improvement. Optimizing the machine and incorporating hygienic elements does not require entirely new machine designs, but will significantly lessen your water and power consumption.

Start small and build up; changing the bearings, feet or castors can be places to start.

Consider sustainable materials and low maintenance designs when building and choosing new equipment and reflect on how they can be more efficient and sustainable than those you have now.

Lastly, ask the end-users, they often know what they need, and sustainable solutions can be tailored around that.

**Ambitious sustainability targets?**

Make water and grease savings go hand in hand with cost reduction.

Calculate your savings [↗](#)



“Food companies now focus on the entire supply chain, including components, to prevent contaminations and protect customer health and brand value”

Niels Vindsmark, CCO at NGI  
in the [Behind Clean Lines Podcast](#) 

## Trend #2

# Quality of Production Machines and Equipment Increases

The food equipment sector is currently navigating through a phase marked by intensified competition and market expansion. This pushes competition and, in an industry, where risk mitigation is more important than price, build quality and hygienic optimization becomes a true differentiator for customers.

Production equipment with little attention to hygienic qualities risks pushing you out of the market, simply because hygienic design means better business for the food producing companies.

### What It Means for You

For both OEM’s and brand owners, this evolving competitive environment presents both challenges and opportunities. Ignoring the competitive landscape and the surge in demand for high-quality equipment can be fatal.

If you are not up to date on hygienic standards, first customer intake will stagnate, and later rules and regulations will restrict your ability to operate in mature markets like the EU and the U.S.

### What to Do

To successfully navigate this competitive landscape, you should adopt a forward-thinking strategy focused on raising quality and hygienic standards.

This includes investing in research and development to stay ahead of global regulatory changes, and actively seeking feedback from end-users to align product offerings with market needs. Emphasizing hygienic and easy-to-clean design can be a key differentiator.

Prioritize staff education for everyone, from production staff to the directors, to push the agenda.

Lastly, cooperate with competitors and industry thought leaders. By doing this, you are catering to a market that values both safety and sustainability and staying ahead of the curve.

## [Resilience Planning]

An agile and diversified supply chain stays atop the agenda across industries.<sup>1</sup>



### Trend #3

# Resilience and Flexibility in Supply Chains Becomes Ever More Important

Recent global disruptions, including the COVID-19 pandemic, supply chain bottlenecks, energy crises, and geopolitical crises have highlighted the need for resilient supply chains. In the hygienic manufacturing sector —as in most sectors— this translates into reevaluating and strengthening your supply chain strategy.

#### What It Means for You

Recognize that a robust supply chain is not just about managing logistics. It's also about ensuring business continuity and customer satisfaction. The recent disruptions have underscored the vulnerability of rigid, global-only supply chains and the importance of agility, adaptability and balancing global with local.

#### What to Do

To improve resilience and agility in your supply chain you should look into modern technology such as AI forecasting and digitalization.

These technologies can enhance forecasting accuracy, optimize inventory management, and streamline operations. Furthermore, to improve resilience and agility, consider the following:

**Diversify:** Reduce dependency on single sources and explore local and/or alternative suppliers to mitigate risks, and perhaps support the local community.

**Real-Time Data:** Implementing systems that provide real-time data across the supply chain fosters informed decision-making. Implementation of technologies such as blockchain will also optimize transparency and help keep track of your supply chain.

**Flexibility:** Be ready to adapt to changes quickly by having flexible processes and contingency plans in place to ensure operational continuity.

Sources: [scw-maq.com](https://www.scw-maq.com), [roimaint.com](https://www.roimaint.com), [gartner.com](https://www.gartner.com), [wolterskluwer.com](https://www.wolterskluwer.com)



Trend #4

# Regulations Will Become More Stringent

As ready-to-eat and processed foods are becoming increasingly popular, and with it comes an increased risk of food poisoning<sup>2</sup>.

To counter this, regulations are already becoming more stringent, and the trend is expected to continue.

Therefore, it is critical for food suppliers to take every precaution in production, consequently demanding greater attention to regulations and risk management from equipment providers.



“The residual food safety is omnipresent”



Jeffrey Banks  
Food Safety Assurance

[Watch the interview](#)

## What It Means for You

This means that staying ahead of regulatory changes becomes essential. Food safety standards like the EN 1672-2 and equivalent standards in the US directly impact hygienic manufacturing, machine design, and market viability.

Effective compliance and proactive innovation are the only feasible strategies, and can lead to improved product quality, enhanced safety, and a competitive edge in the market.

## What to Do

To adapt to this trend, you should:

**1. Stay Informed:** Keep tabs on both current and upcoming food industry regulations, from agencies all around the world i.e. EFSA, FDA.

**2. Balance Compliance with Innovation:** Use regulations as a foundation for designing advanced and efficient machinery. However, simply following regulations will render your company reactive and always behind competition. Balance compliance with vigorous innovation into hygienic manufacturing and optimization to stay ahead of competition and win customers.

**3. Weigh Costs and Benefits:** Understand that while compliance may involve initial costs, the long-term benefits include reduced risks and enhanced market positioning. Don't be pennywise but pound-foolish.

Embracing these practices helps you turn regulatory challenges into opportunities for innovation and market leadership.

Sources: <sup>2</sup>[European Food Safety Authority](#)





# 34%

More than a third of businesses are investing in closing the IT skills gap in their organization.

Forbes

## Trend #5

# Digitalization Enters All Levels of Hygienic Manufacturing

For OEM's and hygienic production companies, there's a significant shift towards integrating digital technologies such as IoT, AI, and blockchain into production lines. These innovations are revolutionizing manufacturing processes, enhancing efficiency, and improving traceability and accuracy, thus redefining production standards.

### What It Means for You

Automated systems and AI-driven insights can minimize errors and accelerate production of and by machines. Technologies like predictive maintenance can optimize machinery lifespan, and blockchain can offer unparalleled supply chain transparency, ensuring product quality and safety.

### What to Do

Adapting to digital integration involves several key steps:

- Develop digital literacy in your company. Your employees need to feel that they are in control of their workplace and tasks, and should be equipped with the skills to handle new technology.

- Make sure that your systems are prepared to adopt the digital advancements.
- Foster a culture of innovation as an open mind is more likely to be adaptable to digital advancements in production.
- Lastly, you should make sure that your cybersecurity is bullet-proof<sup>3</sup>, as digital advancements also bring dangers.

By addressing these challenges, manufacturers can successfully navigate the digital transformation journey, capitalizing on its opportunities to enhance operational excellence and market competitiveness.

Sources: <sup>3</sup>Forbes

# Conclusion

The hygienic manufacturing sector is navigating significant trends: embracing sustainability, responding to a competitive market, tackling chaotic supply chains, complying with evolving regulations, and undergoing digital transformation.

These trends are reshaping the industry, demanding innovation, adaptability, and a focus on eco-friendly practices.

## **Leverage Trends to stay Competitive**

As OEM or brand owner, you can capitalize on these trends by investing in sustainable and hygienic technologies, strengthening supply chains, and embracing digitalization.

Balancing regulatory compliance with innovation is key to staying ahead in a dynamic market. The sector's future success hinges on embracing change. Leaders are urged to drive their organizations towards innovation, invest in emerging technologies, and cultivate a culture open to new ideas.

Adapting to these trends not only ensures compliance and operational efficiency but also positions companies at the forefront of industry advancements.

Want to know more? [Contact us today.](#) 





NGI is a prominent player in the hygienic manufacturing sector, specializing in the food, beverage, and pharmaceutical industries.

Our insights come from extensive experience and observation of industry trends, particularly in hygienic design. At NGI, we are not just a supplier of hygienic components for machine manufacturers, we are also your strategic partner in hygienic optimization and your sparring partner in the transformation to a more hygienic manufacturing landscape.

At NGI, we deliver hygienic expertise and know-how.

If you are about to embark on a journey towards more hygienic production or even just in the market to hygienically optimize your already functional machines, then reach out and our experts will help guide you in the world of hygienics.

