



STERLING
ENGINEERING

2023

NAVIGATING THE FUTURE

2024 MANUFACTURING OUTLOOK

Sterling Engineering

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INTRODUCTION

As we enter 2024, the manufacturing industry is set to undergo a period of transformation that presents both challenges and opportunities. The manufacturing landscape has been rapidly evolving, driven by technological advancements, changes in customer preferences, and the need to address sustainability issues. This eBook will explore the significant trends and factors shaping the manufacturing outlook for 2024.

DIGITAL TRANSFORMATION TAKES CENTER STAGE

Digital transformation has been a buzzword in the manufacturing sector for several years, but it's now becoming a reality for many companies. In 2024, manufacturers will continue to embrace digital technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), Operational Technology (OT), and Blockchain to enhance efficiency, improve decision-making, and optimize supply chains. Integrating data analytics and automation into production processes will enable predictive maintenance, reducing downtime and increasing overall productivity.

SUSTAINABILITY AND ECO-FRIENDLY PRACTICES

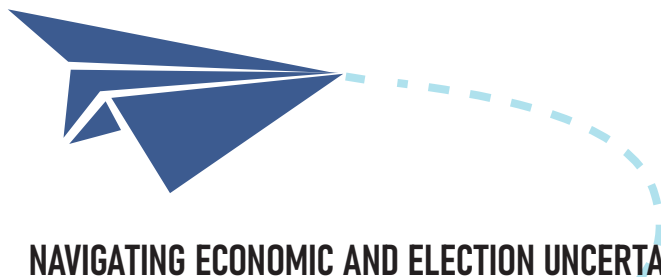
Sustainability is no longer a mere option; it's a necessity. In 2024, the manufacturing industry will witness a surge in eco-friendly practices. Companies will focus on reducing their carbon footprint, embracing renewable energy sources, and implementing circular economy principles. Circular economy is based on three principles:

- 1 Eliminate waste and pollution
- 2 Circulate products and materials
- 3 Regenerate nature*

Sustainable materials sourcing, waste reduction, and efficient recycling will become integral to manufacturing processes. Customers increasingly make buying decisions based on a company's commitment to environmental responsibility, driving this shift.

* - a specification for any design is that the materials re-enter the economy at the end of their use

<https://ellenmacarthurfoundation.org/>



NAVIGATING ECONOMIC AND ELECTION UNCERTAINTY

Global economic fluctuations, trade disputes, and geopolitical tensions can create an atmosphere of unpredictability. Additionally, election cycles and shifts in political leadership often introduce uncertainty regarding regulatory changes and government policies that may affect the manufacturing landscape. These uncertainties can lead some manufacturers to exercise caution, possibly delaying critical decisions or expansion projects until a clearer economic and political outlook emerges. Striking a balance between capitalizing on innovation opportunities and managing risk in uncertain times will be a delicate yet vital challenge for manufacturers in 2024. Adaptable strategies and contingency planning will be critical to navigate the dynamic environment effectively.

RESHORING AND SUPPLY CHAIN RESILIENCE

The disruptions caused by the COVID-19 pandemic exposed vulnerabilities in global supply chains. As a result, many manufacturers will consider reshoring or nearshoring their production to ensure supply chain resilience. The emphasis will be reducing dependency on a single source or location and diversifying suppliers. This shift may increase automation to compensate for higher labor costs in some regions.

HUMAN-AI COLLABORATION

While automation continues to grow, the relationship between humans and AI will evolve. Manufacturers will increasingly adopt collaborative robots (cobots) that work alongside human employees, enhancing efficiency and safety. Workers must acquire new skills to operate and interact with these technologies effectively. Upskilling and retraining programs will be vital to ensure a capable workforce.

REGULATORY AND COMPLIANCE CHANGES

Manufacturers will have to adapt to evolving regulations and compliance requirements. In particular, data privacy and cybersecurity will be paramount, given the increasing digitization of manufacturing processes. Companies will invest in robust cybersecurity measures and compliance teams to navigate the complex regulatory landscape.

WORKFORCE MANAGEMENT

Amid these transformative changes, the manufacturing staffing landscape for 2024 is set to undergo significant shifts. With the industry's growing emphasis on automation and digitalization, the demand for highly skilled workers in data analysis, robotics programming, and cybersecurity will surge. Manufacturers must invest in comprehensive training and education programs to bridge the skills gap and ensure their workforce is equipped to operate in the increasingly tech-driven environment.

SIA predicts a 4% growth in the contingent workforce for industrial and engineering and a 7% growth in IT in 2024. (<https://cwstrategies.staffingindustry.com/the-road-ahead-be-prepared-with-sias-forecast/>)

Additionally, collaborative efforts between industry stakeholders, educational institutions, and government bodies will play a pivotal role in creating a talent pipeline to meet these evolving demands. At the same time, the workforce will continue to diversify, with a greater focus on gender and ethnic diversity, as well as inclusivity initiatives to foster a more innovative and inclusive manufacturing sector. In 2024, manufacturers prioritizing workforce development and diversity will gain a competitive edge in attracting and retaining top talent.

CONCLUSION

Looking ahead to 2024, the manufacturing industry will focus on innovation and adaptability. Companies incorporating digital transformation, sustainability, and resilience into their operations will have a competitive advantage. Success in this new era will rely on collaboration between humans and AI and a commitment to eco-friendly practices. Manufacturers who stay ahead of these trends and challenges will be poised to seize opportunities and ensure a prosperous future for their industry.



LEVERAGING STERLING OUTSOURCED ENGINEERING & WORKFORCE SOLUTIONS

IN THE 2024

MANUFACTURING LANDSCAPE

As manufacturers navigate the complex terrain of the 2024 manufacturing outlook, partnering with an expert outsourcing firm like Sterling can prove invaluable. Sterling's Outsourced Engineering and Workforce Solutions are tailor-made to address the evolving needs of the industry.



Outsourced Engineering Services

ACCESS TO SPECIALIZED EXPERTISE

With Sterling Engineering, you can tap into specialized skills and expertise that might be absent within your organization. This expertise includes mastering technologies, software, and hardware. Sterling Engineering's partnership ensures your products are built with advanced and efficient methods.

INCREASED FLEXIBILITY

You can work with Sterling Engineering on a project-by-project basis, scaling up or down your technical capabilities as needed. This flexibility can be particularly valuable for companies that experience fluctuations in demand or need to respond quickly to changing market conditions.

COST SAVINGS

Instead of recruiting and training new employees, you can collaborate with a partner, like Sterling Engineering, with the required skills and expertise – helping you lower overhead costs and allocate resources to other aspects of your business.

FULL CYCLE PROJECT MANAGEMENT

As an experienced outsourced engineering firm, we can augment any stage in the project process. Sterling Engineering assembles diverse engineering teams to support the project from initial concept through implementation: customizable in-house or off-site solutions. This approach ensures that every aspect of a project is properly planned, executed, monitored, and closed, with a focus on achieving project objectives efficiently and effectively.

Workforce Solutions

ACCESS TO SPECIALIZED TALENT

Sterling staffing solutions can provide manufacturers access to a diverse pool of specialized engineering talent. Whether for developing cutting-edge automation systems or optimizing digital infrastructure, Sterling's network of skilled professionals can help manufacturers bridge the talent gap and tap into the expertise needed for digital transformation and advanced manufacturing practices.

SCALABILITY AND FLEXIBILITY

Manufacturing operations often experience fluctuations in demand. Sterling's contract or contract-to-hire solutions offer manufacturers the flexibility to scale their workforce up or down as needed, helping to manage costs and optimize resources in line with market dynamics.

DIVERSE AND INCLUSIVE TALENT POOL

Sterling understands the significance of diversity and inclusion in the modern workforce. Their recruitment strategies are designed to attract talent from diverse backgrounds, fostering innovation and creativity within manufacturing teams.

STREAMLINED REGULATORY COMPLIANCE

Our expertise in regulatory compliance ensures that manufacturers adhere to ever-changing industry standards. This is particularly critical as manufacturing operations become increasingly digitized, with stringent data privacy and cybersecurity requirements.

COST OPTIMIZATION

Sterling's solutions can help manufacturers optimize costs by efficiently managing labor expenses, reducing turnover, and ensuring staffing resources align with strategic objectives.



CONCLUSION

In the dynamic manufacturing landscape, where technology, sustainability, and skilled labor are pivotal, Sterling's Outsourced Engineering and Workforce Solutions provide manufacturers with the tools and expertise needed to thrive. By partnering with Sterling, manufacturers can stay ahead of industry trends, mitigate challenges, and seize opportunities, ultimately ensuring a successful and sustainable future in the ever-evolving manufacturing world. Let us design a customized solution for you.

WORKFORCE
TALENT
SOLUTIONS



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