

**WNS**

# **TOP 5 TRENDS** TRANSFORMING THE MANUFACTURING INDUSTRY

A WNS PERSPECTIVE





**'Smarter'  
Factories**



**Building  
Cybersecurity  
Capabilities**



**Lean Efficiency**



**Transforming  
Sustainability**



**Co-creating  
with Employees**

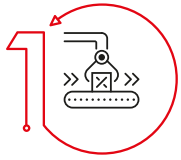
# TOP 5 TRENDS TRANSFORMING THE MANUFACTURING INDUSTRY

## A WNS Perspective

Picture this: a factory with an autonomous inventory that is handled by silent drones that are indoor-controlled can independently scan and track labels in the warehouse – and compare them with available stocks. Self-learning and collaborative robots, driverless transportation systems, digital twinning and smart data solutions drive individualized production methods.

This is everyday reality at Magna Steyr's production plant in Graz. The Austrian-Canadian automotive supplier houses this smart factory, in which people, processes and infrastructure work and communicate with each other seamlessly in real-time.

The Fourth Industrial Revolution is impacting the manufacturing industry across production, supply chains and customer engagement. In the immediate, and long-term future, here are five trends that are transforming this industry.



## 'SMARTER' FACTORIES

Humans and machines will work together seamlessly as smart factories increasingly leverage automation, Artificial Intelligence (AI), and Internet of Things (IoT), and interact with each other. The digital twin, as a factory's virtual representation, will provide the right information on work to be executed – thus sharpening creativity and flexibility by leveraging the experience of humans.

Wearable devices will enable manufacturers to efficiently monitor and increase productivity, employee safety and efficiency. This will also help in collecting valuable information and extracting vital insights to deliver customized experiences – besides enhancing predictive maintenance to identify potential issues before they even occur. Augmented Reality (AR) and Virtual Reality (VR) will make processes more efficient, and improve product design and development. The advent of 5G networks, with their high capacity, flexibility and low-latency performance, will be the perfect enabler for resourceful deployment of emerging technologies.

Philips' Drachten development and production center has deployed automated assembly lines, 3D printing, robots, advanced analytics, and digital twins to achieve 'first-time right' designs, demand-driven supply chains, and customized, yet 'zero-defect' manufacturing.



## BUILDING CYBERSECURITY CAPABILITIES

As IoT connects and integrates more devices and manufacturing systems, cybersecurity will take prime importance. Organizations will leverage automation and data-driven approach to establish visibility while continuously monitoring risky assets, and deploy security controls to address the risks. AI systems will be stacked with both offensive and defensive capabilities and will become simpler and more accessible.

Deep learning security algorithms, automated systems, and biometric identity protection will considerably evolve to meet cyber threats. Cybersecurity-related activities and threat intelligence will assume primary importance as more organizations treat it as a business imperative. In an increasingly punitive regulatory landscape, regulators will also come down heavily on data breaches.



## LEAN EFFICIENCY

Manufacturers will focus on leaner operations to protect gross margins – through better inventory, shorter cycles and shop floor efficiency. Quality of products and experiences will be enhanced for customer retention. This will be achieved through increased volume production for optimal control of per unit cost.

Workflows and processes will be transformed for greater visibility, optimized schedules, reduced product recalls, minimized risks, better supplier performance and improved compliance. A German automotive ancillary manufacturer is already leading by example.<sup>1</sup> The company has developed a Surface Mounted Device (SMD) line which uses intelligent process control systems based on data analytical methods to improve quality, reduce failure rates and bring down operating costs. Developed with the company's top management, the SMD line is comprehensively automated and manages material demands for current and upcoming production cycles. Flexibility and scalability are the prime features of the SMD line as it can respond dynamically with fluctuating volumes and product variability.

Manufacturing companies will also integrate siloed accounting, supply chain, enterprise resource planning and manufacturing execution systems to become more agile and cost-efficient for short-notice production changes without slipping on quality.



## TRANSFORMING SUSTAINABILITY

As commitment to the environment becomes an imperative for building a credible reputation, manufacturers will look to turning sustainability initiatives into a powerful and competitive advantage. For example, a U.S. manufacturer has transformed its sustainability initiatives into profitable outcomes. Through lean methods of water reclamation strategies and systems, as well as energy conservation initiatives to scale solar energy use across its production centers, the manufacturer is consistently innovating for a better environment and improved revenues.

Initiatives in this direction will extend to creative and sustainable designs of lighter, bio-degradable products, and recyclable packaging, besides energy-efficient production equipment.



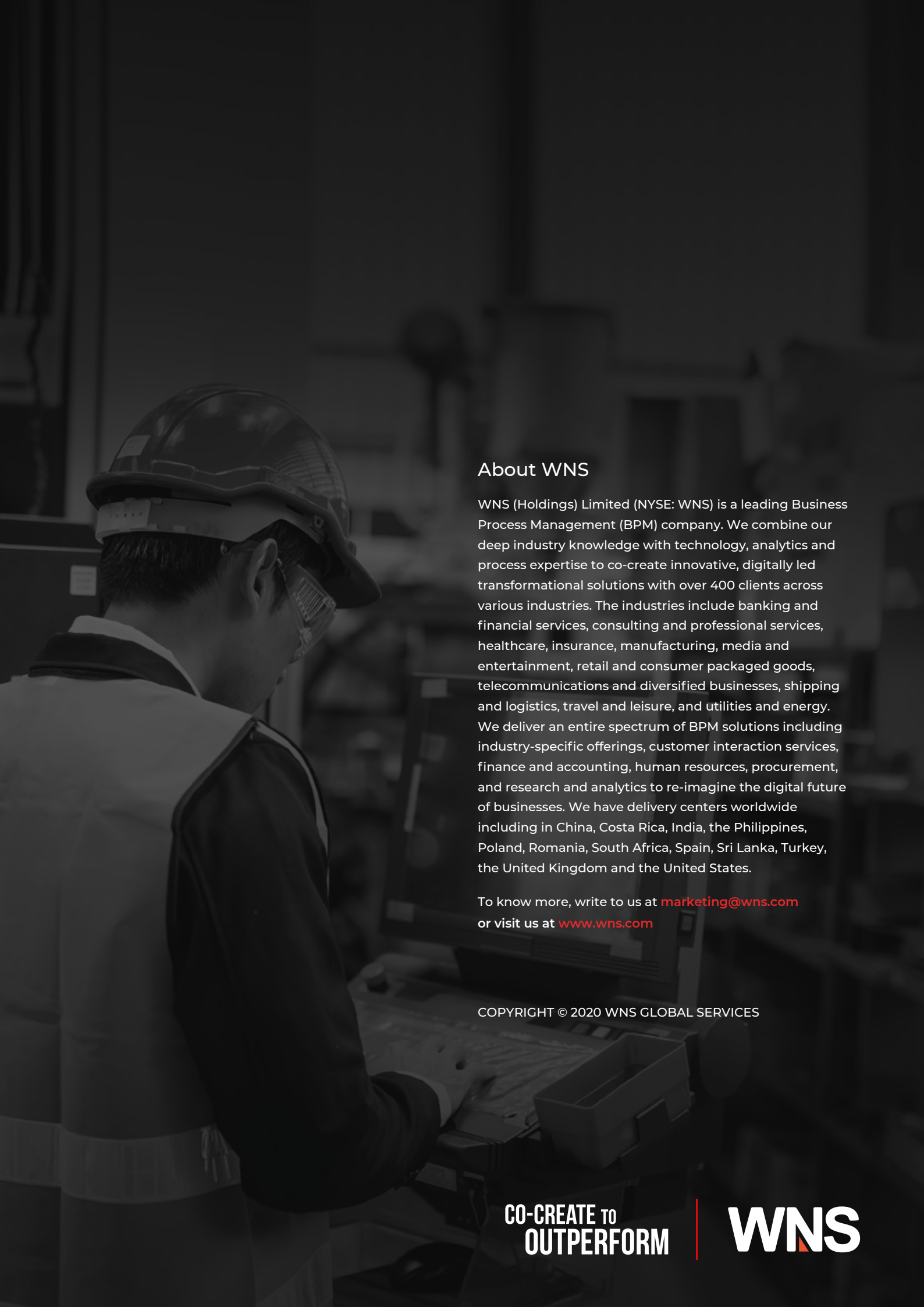
## CO-CREATING WITH EMPLOYEES

Beyond hiring more staff and training existing ones, manufacturing companies will focus on making employees feel more comfortable in collaborating with machines and working alongside them. This includes making employees part of a comprehensive digital culture, and building stakeholders' trust in emerging technologies that need to be deployed. Employees must be included at all stages of introducing and developing new technologies. Workers at Magna Steyr have been training alongside the company's collaborative robots. Additionally, the company is evaluating technology prototype testing in a learning line before rolling it out into production, ensuring that workers are involved in all the stages.

A sound blueprint for transformation will involve creating a digital strategy with defined capabilities and introducing pilot projects before integrating them into a comprehensive digital ecosystem. Manufacturers can integrate digital features into products, and transform data into value-added services that can be effectively monetized. This will lead to newer business models to improve margins and market share, and create new avenues of growth and profits – the future does hold limitless opportunities!

<sup>1</sup><https://www.pwc.de/de/digitale-transformation/digital-factories-2020-shaping-the-future-of-manufacturing.pdf>





## About WNS

WNS (Holdings) Limited (NYSE: WNS) is a leading Business Process Management (BPM) company. We combine our deep industry knowledge with technology, analytics and process expertise to co-create innovative, digitally led transformational solutions with over 400 clients across various industries. The industries include banking and financial services, consulting and professional services, healthcare, insurance, manufacturing, media and entertainment, retail and consumer packaged goods, telecommunications and diversified businesses, shipping and logistics, travel and leisure, and utilities and energy. We deliver an entire spectrum of BPM solutions including industry-specific offerings, customer interaction services, finance and accounting, human resources, procurement, and research and analytics to re-imagine the digital future of businesses. We have delivery centers worldwide including in China, Costa Rica, India, the Philippines, Poland, Romania, South Africa, Spain, Sri Lanka, Turkey, the United Kingdom and the United States.

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