

Customization and Flexible Manufacturing Mass Customization: Smart factories can quickly adjust to customer demands, offering personalized products with a high degree of customization.

Just-in-Time (JIT) Production: Through the use of sensors, IoT, and AI, smart factories can adopt more efficient inventory management practices, reducing stockpiling and optimizing resource utilization.

Supply Chain Integration Smart Logistics: Smart factories often integrate their operations with the broader supply chain, allowing real-time tracking of materials, inventory levels, and order statuses.

Energy Efficiency and Sustainability Energy Monitoring: Smart factories use advanced sensors and analytics to monitor and control energy usage, ensuring that resources are utilized efficiently.

Sustainability: Automation and IoT also help minimize waste by optimizing production schedules, improving material usage, and reducing the energy needed for each unit produced.

Safety and Ergonomics: Smart factories often employ advanced safety systems, including wearables that monitor workers' vital signs or sensors that ensure machines do not operate in a hazardous manner.

Risk Management: Regular cybersecurity audits, threat detection tools, and secure communications ensure that the factory is protected from cyber-attacks or system breaches.

The work environment is designed to facilitate collaboration between humans and machines, with systems such as predictive tools, AR, and intuitive interfaces to assist operators.

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