

6. 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. 7. 8. 9. 10. 11.