

THE IMPACT OF AUTOMATION ON PRODUCTION

Production automation is the implementation of technological solutions and systems to perform tasks without significant human intervention. This includes the use of machines, robots, computerised control systems, machine learning and other technologies to optimise and increase the efficiency of production processes, reduce costs and improve productivity. Automation enables routine tasks to be performed faster, more accurately and more efficiently, and increases the ability to control and monitor production processes.

Automation helps to reduce production costs as it optimises processes and ensures efficient use of resources. Reducing the need for manual labour can help reduce labour costs.

Automated systems can operate without interruption or fatigue, resulting in significant productivity gains. They can produce products 24/7, delivering more units per unit of time.

Automation helps to avoid errors that can be typical of human labour. Automation systems can ensure consistent product quality and precision in every manufactured product.

Automation can reduce the need for people to work in dangerous or difficult conditions. This improves worker safety and reduces the risk of occupational diseases.

Automation allows for more efficient production control and real-time process control. This makes it easier to make management decisions and increases responsiveness to changes in the market.

Automation helps to reduce the cost of raw materials, energy and other resources due to the accuracy and efficiency of production processes.

Businesses that implement automation can become more competitive in the market by reducing costs and improving productivity.

The impact of automation on employment is a complex and varied process that includes both positive and negative aspects. Here are some of them:

Positive aspects: **Creation of new jobs:** While automation may lead to a reduction in certain types of work, it also creates demand for new types of jobs related to the development, maintenance and repair of automated systems. **Increased productivity:** With automation, businesses can produce more output in less time. This can lead to an increase in labour demand in related industries and create new opportunities for workers.

Improving the quality of work: Automation helps to avoid errors that can be caused by human error. This improves the quality of production and increases the competitiveness of enterprises. **Improved working conditions:** Reducing routine tasks for workers can make their jobs easier and improve working conditions, especially in hazardous or difficult production environments.

Negative aspects: **Job losses:** Automation can lead to job losses in industries where jobs are made redundant by automation. **The need for retraining:** The process of automation requires workers to learn new skills and competences. This can be a difficult task for those who have lost their jobs to automation. **Social impact:** Changes in employment can have social consequences, such as unemployment, social tensions and income inequality. **Insecurity:** There may be a sense of insecurity among workers about the possibility of losing their jobs to automation.

Automation of production is an essential stage in the development of modern technology and production. It has numerous benefits, but also requires careful consideration of the impact on employment and the environment. It is important to balance the pros and cons of automation, ensuring maximum benefit for society and business.

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